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Comparing the Costs of Military Treatment Facilities with Private Sector Care

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Executive Summary

Background

Over the last decade, personnel costs have been the fastest-rising component of the Department of Defense (DoD) budget, driven to a considerable degree by expenses for healthcare. Concerned about the impact of rising healthcare and other personnel costs on military readiness, the Congress established the Military Compensation and Retirement Modernization Commission (MCRMC) to perform a systematic review of the military compensation and retirement systems and to make recommendations for modernization.

The Military Health System (MHS) is responsible for providing health support for the full range of military operations (the "medical readiness mission") and for providing a peacetime healthcare benefit for Uniformed Services members (both Active and Reserve), retirees, survivors, and family members. The latter benefit, known as TRICARE, serves 9.5 million beneficiaries worldwide, and consists of care in Military Treatment Facilities (MTFs) (*direct care*) supplemented by networks of civilian healthcare professionals, institutions, pharmacies, and suppliers (*purchased care*). Beneficiaries also have access to out-of-network providers at a higher out-of-pocket cost.

The Institute for Defense Analyses (IDA) was asked to support the MCRMC by performing research to assist the Commission's considerations of potential modifications to the provision of health-related services. To help inform the Commission's recommendations, the Commission asked IDA to estimate the costs of delivering care in MTFs and to compare those costs with their private sector counterparts.

As a prelude to our analyses of MTF costs, we introduce the MHS budget and break out the major components of MHS costs. All appropriations that together fund the MHS constitute the Unified Medical Program (UMP). Total UMP expenditures in fiscal year (FY) 2014 were over $49 billion; FY 2015 expenditures are projected to be slightly less. However, the slight downturn in UMP expenditures is due primarily to direct reductions in Active Duty end strength and their indirect impact on other programs (e.g., future healthcare costs of military retirees); per capita costs continue to increase.

We considered three characterizations of cost: budgeted cost, full cost, and healthcare cost. The full cost is the most comprehensive, as it captures both DoD and non-DoD costs and both near-term and future costs—the future costs on an accrual basis. The budgeted cost excludes many of the costs that are part of the full cost of manpower. The cost of care includes those costs associated with the direct delivery of healthcare and excludes readiness and overhead costs (as well as costs directly associated with care

delivery that are not included in the DoD healthcare databases). The budgeted cost is 69 percent higher than the healthcare cost and the full cost is 98 percent higher, indicating the extent to which the UMP is composed of administrative, management, overhead, and readiness costs.

Direct vs. Purchased Healthcare Costs

The remainder of the paper is focused on comparing direct with purchased care costs at the MTF level. Obtaining cost estimates for the direct care system that are commensurate with purchased care costs is challenging because the former has significant fixed costs over short and intermediate time horizons and cost accounting systems that do not capture most overhead costs. Given those challenges, the costs we considered are limited to the healthcare portion of the total; i.e., our estimates do not include military construction, procurement, or the additional factors that comprise the full cost of delivery that are not easily allocated across individual MTFs.

We computed the actual cost of producing MTF workload and an estimate of what the same amount and intensity of care would cost if priced at private sector rates for inpatient, outpatient, and prescription drug services, confining the comparisons to a 50-mile radius around each MTF. For each medical service type, we considered two different ways of measuring MTF efficiency relative to the private sector. The first prices MTF workload at total private sector rates, regardless of payer (DoD, beneficiary, and other health insurance (OHI)). This measure is most useful for comparing the efficiency of one MTF to another, conditional on the workload they produce. The second prices MTF workload at only DoD's share of private sector costs. This is more appropriate for measuring the efficiency of care management, as it considers the effect of beneficiary copays and OHI in determining the most cost-effective way of delivering care.

Inpatient Costs

For comparing inpatient costs, we used two measures of workload: Relative Weighted Products (RWPs) for non-mental health Diagnosis-Related Groups (DRGs) and bed-days for mental health DRGs (see Appendix A for definitions of RWPs and DRGs). Inpatient professional services costs (i.e., the physician's cost of delivering care in a hospital setting) are already included in the direct care inpatient records and cannot be broken out separately from hospital costs. We therefore included them on the purchased care side as well.

We valued the inpatient workload for each of the 41 domestic DoD hospitals at purchased acute care hospital rates, matching each direct care DRG with the corresponding one within a 50-mile radius around each MTF. In some cases, no matching DRG was found but, overall, 93 percent of DRGs matched. An MTF was deemed to be "efficient" if its actual inpatient workload cost was lower than its value at purchased care

rates. Of the 41 domestic military hospitals, only five produced inpatient workload at lower cost than in the private sector. Overall, the cost of providing direct care inpatient workload at the 41 domestic DoD hospitals would have been 34 percent lower had the workload been performed in private sector facilities. If only the cost to DoD is considered, the cost would have been 49 percent lower. Actual direct care costs and the discrepancy between them and the value of direct care workload would have been even larger had we taken into account the full cost of military manpower, facility construction costs, and program overhead.

Outpatient Costs

For outpatient care, we used two measures of workload: Relative Value Units (RVUs) for non-facility procedures and Ambulatory Payment Classification (APC) weights for facility procedures.[1] Once we applied appropriate data manipulations and calculations to make direct care outpatient records commensurate with purchased care claims data, we valued outpatient direct care in a manner similar to that for inpatient care.

Because there are over 300 ambulatory care clinics (including those collocated at military hospitals), including troop clinics (largely conducting sick call) and other stand-alone clinics with small workload levels, we aggregated all "child" clinic workload and costs in the United States to their parent facility. This reduced the number of clinics under consideration to 109. We then valued the non-facility outpatient workload at purchased care rates for each domestic DoD clinic reporting outpatient workload, matching each direct care procedure with the corresponding one at private sector facilities located within a 50-mile radius of each MTF. We selected a 50-mile radius as our search area because it resulted in a high match rate (93 percent overall) between the large number of procedures performed at many MTFs and those performed in the surrounding area.

To value facility workload, we were unable to apply a methodology analogous to the one we used for non-facility workload because APC weights are not recorded in the purchased care claims data. We therefore applied a single cost factor ($71.31 per APC weight) obtained from the Office of the Assistant Secretary of Defense for Health Affairs [OASD(HA)] to direct care APCs to value facility workload.

All but one parent MTF would have had lower outpatient costs had they been able to provide care at the same cost per episode as the private sector. Overall, the cost of

[1] The facility/non-facility designation refers to where the medical services are performed. Facility records contain information on procedures performed in an outpatient hospital (primarily ambulatory surgery centers and emergency rooms) and include measures of the workload performed by both the hospital (equipment, beds, drugs, nursing staff, etc.) and the physician or other clinician performing the medical or surgical procedure(s). Non-facility records contain information on procedures performed in a doctor's office or clinic. APC weights apply only to facility workload, whereas RVUs vary depending on where the services are performed (facility or non-facility). See Appendix A for a description of RVUs and APC weights.

providing direct care outpatient workload at the 40 domestic DoD hospitals and clinics with over $50 million in costs would have been 35 percent lower had the workload been performed in private sector facilities. If only the cost to DoD is considered, the cost would have been 43 percent lower. Actual direct care costs and the discrepancy between them and the value of direct care workload would have been even larger had we taken into account the full cost of military manpower.

Prescription Drug Costs

Prescription drugs are one product for which DoD has a significant cost advantage over commercial pharmacies. DoD purchases drugs directly from manufacturers and pays Federal Supply Schedule (FSS) prices for drugs dispensed by MTFs and through home delivery. These prices are available to all direct federal purchasers and are intended to be no more than the prices manufacturers charge their most-favored non-federal customers under comparable terms and conditions. Because DoD is one of the "Big Four" purchasers of pharmaceuticals, it receives even deeper discounts under the FSS. By law, these prices are 24 percent lower than non-federal average manufacturer prices.

Our analysis of prescription drugs differs from those for inpatient and outpatient care in that we are not comparing the costs of MTF production with purchased care, i.e., DoD does not "produce" drugs, it purchases and dispenses them. After comparing the cost of prescriptions filled at military pharmacies with those filled at private sector pharmacies, we estimate that the overall cost of dispensing direct care prescriptions would have been 42 percent higher had the prescriptions been dispensed at a mix of retail and home delivery pharmacies. The latter percentage drops to 8 percent if we consider only the cost to DoD.

Contents

1. Introduction

For at least the past decade, personnel costs have been the fastest-rising component of the Department of Defense (DoD) budget, driven largely by healthcare costs. Even though the government has been spending record amounts on defense, DoD's budget is being squeezed by rising healthcare costs that have increasingly crowded out funding for weapon systems, training, and other operational needs. In fiscal year (FY) 2002, the Unified Medical Program (UMP), consisting of in-house healthcare, purchased healthcare, the Medicare-Eligible Retiree Healthcare Fund (MERHCF), military personnel, and military construction—a total of $23.7 billion[1]—accounting for 7.2 percent of the base DoD budget. By FY 2012, the UMP had risen to $52.9 billion[2] and accounted for 10 percent of the base DoD budget. The UMP dropped to $48.4 billion in FY 2013 and has remained roughly at that level through FY 2015, but the reductions have come as a result of cuts in Active Duty end strength, automatic spending cuts known as sequestration (the 10 percent across-the-board cuts to DoD and other domestic discretionary programs imposed on March 1, 2013), a winding down of the wars in Iraq and Afghanistan, and other factors. The factors that have been driving the increase in healthcare spending[3] remain in play, as per capita costs continue to increase.[4] With future DoD budgets expected to decline, healthcare costs will likely consume an even greater share of the DoD budget.

Concerned about the impact of rising healthcare and other personnel costs on military readiness, the Congress, through enactment of the National Defense Authorization Act (NDAA) for FY 2013, Section 671, established the Military Compensation and Retirement Modernization Commission (MCRMC, referred to in most

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1 Richard R. Bannick et al., *Evaluation of the TRICARE Program: Fiscal Year 2005 Report to Congress* (Washington, DC: Department of Defense, February 2005).

2 Richard R. Bannick et al., *Evaluation of the TRICARE Program: Access, Cost, and Quality – FY 2015 Report to Congress* (Washington, DC: Department of Defense, March 2015).

3 See Bipartisan Policy Center, "What Is Driving U.S. Health Care Spending? America's Unsustainable Health Care Cost Growth," September 20, 2012, http://bipartisanpolicy.org/library/what-driving-us-health-care-spending-americas-unsustainable-health-care-cost-growth/, for factors driving healthcare cost increases in the private sector. Many of the same factors are driving increases in the cost of military healthcare.

4 The basis for this statement is the trend in the sum of per capita inpatient, outpatient, and prescription drug costs, as displayed in Bannick et al., "FY 2015 Evaluation of the TRICARE Program."

places hereafter as simply "the Commission") to perform a systematic review of the military compensation and retirement systems and to make recommendations to modernize them in order to:

- Ensure the long-term viability of the All-Volunteer Force by sustaining the required human resources of that force during all levels of conflict and economic conditions;
- Enable the quality of life for members of the Armed Forces and the other uniformed services and their families in a manner that fosters successful recruitment, retention, and careers for members of the Armed Forces and the other Uniformed Services; and
- Modernize and achieve fiscal sustainability for the compensation and retirement systems for the Armed Forces and the other Uniformed Services for the 21st century.

The DoD healthcare benefit is referred to as TRICARE, named for the initial three levels of coverage that it offered—TRICARE Prime (a Health Maintenance Organization-like benefit requiring enrollment but offering little or no beneficiary cost sharing), Standard (a fee-for-service benefit with the highest beneficiary cost shares), and Extra (a Preferred Provider Organization-like benefit offering reduced beneficiary cost shares). Since its inception in 1995, the original TRICARE benefit has been supplemented with numerous special plans and programs that provide additional benefits to certain classes of beneficiaries (e.g., TRICARE for Life for Medicare-eligible beneficiaries, TRICARE Reserve Select for members of the Selected Reserve, and TRICARE Young Adult for unmarried adult children of eligible sponsors). TRICARE unites the worldwide healthcare resources of the Uniformed Services (often referred to as *direct care*, usually in military treatment facilities, or MTFs) and supplements them with network and non-network participating civilian healthcare professionals, institutions, pharmacies, and suppliers (often referred to as *purchased care*) to expand access to healthcare services while maintaining the capability to support military operations.

There are no premiums for the three main TRICARE benefits (i.e., Prime, Standard, and Extra, although there is a modest fee for retirees and family members to enroll in Prime), and beneficiary cost shares tend to be much lower than in the private sector. TRICARE also offers a more generous benefit structure than do most commercial plans. For those reasons, TRICARE beneficiary utilization tends to be much higher than in the private sector,[5] resulting in higher per capita costs to DoD. Also, DoD costs have been

[5] Richard R. Bannick et al., *Evaluation of the TRICARE Program: Access, Cost, and Quality – FY 2014 Report to Congress* (Washington, DC: Department of Defense, March 2014).

rising because TRICARE cost shares have remained fixed since its inception but have actually declined in terms of real dollars. At the same time, healthcare premiums and cost shares have risen substantially in the private sector. This has made TRICARE more attractive to retirees and others with private health insurance and has induced many who previously made little or no use of TRICARE to start using it, either as their primary plan or as a supplement.[6]

On January 29, 2015, the Commission released its final report with recommendations for modernizing military compensation, including healthcare.[7] That report recommended that the current TRICARE benefit be replaced with a selection of commercial insurance plans offered through a DoD health benefit program. Affected beneficiaries include Active Duty family members, Reserve Component members, and retirees and family members under age 65. Active Duty Service members would continue to receive the majority of their care at MTFs, and Medicare-eligible retirees over age 65 would continue to receive the TRICARE for Life benefit (Medicare wrap-around coverage). The Commission's recommendation to overhaul the military healthcare benefit was supported by an Institute for Defense Analyses (IDA) study that found the alternative plan to be more cost-effective than the current TRICARE benefit.[8] At the same time, the Commission contended that the access, choice, and value of care would improve under the alternative.

It is important to understand the cost of the military healthcare benefit and its component elements when considering how the benefit can be modernized and made more sustainable. IDA therefore estimated the cost of delivering care at MTFs and compared those costs with their private sector counterparts. To do this, we compared the actual cost of producing MTF workload with an estimate of what that workload would have cost if priced at private sector rates.

Chapter 2 provides a detailed presentation of military healthcare costs under TRICARE. We also provide a description of the components of the President's Budget that fund DoD healthcare, along with additional budgetary costs that are frequently excluded in other analyses. Chapter 3 is concerned with healthcare delivery under the current TRICARE benefit and compares the relative costs of delivering inpatient,

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6 Lawrence Goldberg et al., "Demand for Health Insurance by Military Retirees," IDA Document D-5098 (Alexandria, VA: Institute for Defense Analyses, May 2015).

7 Military Compensation and Retirement Modernization Commission, *Report of the Military Compensation and Retirement Modernization Commission: Final Report*, January 2015, http://www.mcrmc.gov/public/docs/report/mcrmc-finalreport-29jan15-lo.pdf.

8 Sarah K. Burns, Philip M. Lurie, and Stanley A. Horowitz, "Analyses of Military Healthcare Benefit Design and Delivery: Study in Support of the Military Compensation and Retirement Modernization Commission," IDA Paper P-5213 (Alexandria, VA: Institute for Defense Analyses, January 2015).

outpatient, and prescription drug services in-house versus in the private sector. Finally, Chapter 4 summarizes our findings.

2. Military Healthcare Costs

The Military Health System (MHS) is responsible for providing health support for the full range of military operations (the "medical readiness mission") and for providing a peacetime healthcare benefit for Uniformed Services members (both Active and Reserve), retirees, survivors, and family members. The latter benefit, known as TRICARE, serves 9.5 million beneficiaries worldwide, and consists of care in MTFs supplemented by networks of civilian healthcare professionals, institutions, pharmacies, and suppliers. Beneficiaries also have access to out-of-network providers at a higher out-of-pocket cost.

This chapter introduces the MHS budget and breaks out the major components of MHS costs. We consider three characterizations of cost: budgeted cost, full cost, and healthcare cost. Policies and procedures for calculating DoD civilian and military manpower costs for programming and budgeting purposes are established through guidance issued by the Under Secretary of Defense (Comptroller) (USD(C)) and the Director of Cost Assessment and Program Evaluation as part of the annual integrated program and budget review process. However, there are many costs to the government that are not captured (either partially or completely) by the *budgeted cost*. The *full cost* is a more comprehensive representation of the true cost to the government, as it captures both DoD and non-DoD costs, and both near-term and future costs—the future costs on an accrual basis. DoD Instruction 7041.04[9] establishes the procedures for estimating the full costs of Active Duty military and DoD civilian manpower and contract support. The *cost of care* includes those costs associated with the direct delivery of healthcare and excludes readiness and overhead costs (as well as costs directly associated with care delivery that are not accounted for in the DoD healthcare databases).

A. The President's Budget

The President's Budget (PB) is the Administration's proposed plan for managing funds, setting levels of spending, and financing the spending of the federal government.[10]

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[9] DoDI 7041.04, "Estimating and Comparing the Full Costs of Civilian and Active Duty Military Manpower and Contract Support," July 3, 2013.

[10] Government Accountability Office, "A Glossary of Terms Used in the Federal Budget Process," 2005.

The PB includes funding requests for all federal executive departments and independent agencies, including DoD. The Defense Health Program (DHP) appropriation partially funds the TRICARE benefit (both direct and purchased care), the majority of DoD non-deployable healthcare activities, and some deployable healthcare activities. The DHP is composed of several budget activities, including the following:

- In-House Care – medical and dental care in DoD medical centers, hospitals, and clinics;
- Private Sector Care – medical and dental care received by DoD-eligible beneficiaries in the private sector;
- Consolidated Health Support – functions that support military medical readiness and delivery of patient care (e.g., aeromedical evacuation);
- Information Management/Information Technology (IM/IT) – resources required to support both centrally and non-centrally managed DoD health information systems, communications, and computing infrastructure;
- Management Activities – the US Army Medical Command, the Navy Bureau of Medicine and Surgery, the Air Force Medical Operations Agency, and the Defense Health Agency;
- Education and Training – the Health Professions Scholarship Program, the Uniformed Services University of the Health Sciences, and other specialized skill training and professional development education programs;
- Base Operations/Communications – DoD medical and dental facility restoration and modernization, maintenance and repair activities, base communications and support, environmental, and miscellaneous other activities;
- Procurement – the procurement of a wide variety of medical items ranging from surgical, radiographic, and pathologic apparatus to medical administrative support equipment; and
- Research, Development, Test and Evaluation (RDT&E) – advanced medical research and development for wounded warriors and in areas of most pressing need for Active Duty Service members (ADSMs) and their families.

Other appropriations that fund the MHS and which, together with the DHP, constitute the Unified Medical Program (UMP) include:

- Medicare-Eligible Retiree Healthcare Fund (MERHCF), often referred to as the "Accrual Fund" – DoD normal cost contribution funded by the Military Services through the Military Personnel (MILPERS) appropriation. The UMP-funded

portion of the MERHCF accounts for the future costs of healthcare[11] for the subset of current Service members who will eventually retire from the military and become eligible for Medicare.

- MILPERS, funded by the Service Departments – The UMP portion of the MILPERS appropriation includes the costs of salaries and allowances for Active and Reserve personnel assigned to the DHP (doctors, nurses, corpsmen, other healthcare providers, administrators, etc.). It also covers personnel-related expenses such as permanent change of duty station (PCS), training in conjunction with PCS moves, subsistence, temporary lodging, bonuses, and retired pay accrual. Civilian and contractor personnel are covered by the In-House Care budget activity group.
- Major military medical construction (MILCON), also funded by the Service Departments, is considered an investment account. MILCON can include funding for new hospitals and clinics, major hospital alterations and reconstruction, family housing construction, and land acquisition costs. Project costs include architecture and engineering services, construction design, real property acquisition costs, and land acquisition costs necessary to complete the construction project.

Figure 1 displays the trend in recent UMP funding. A steady trend of increasing DoD expenditures on healthcare was broken in FY 2013 when the UMP declined by $4.5 billion. That decline was due to a number of factors, including:

- Reductions for sequestration;[12]
- Reduced Accrual Fund contributions from the Services' MILPERS accounts to account for the future healthcare of current Service members. That reduction coincides with DoD's plan to draw down Active Duty end strength.[13] In addition, DoD's Office of the Actuary lowered its estimate of future per capita

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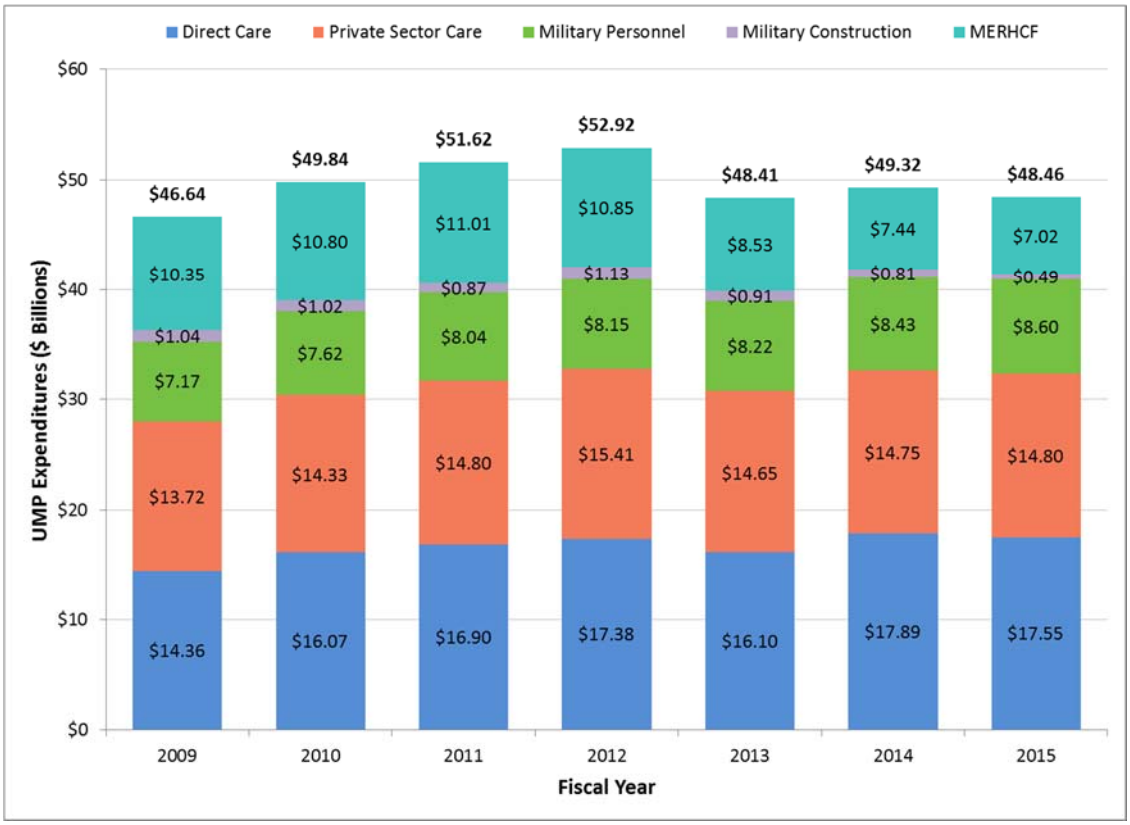
[11] The Accrual Fund, implemented on October 1, 2002, pays the cost of DoD healthcare programs for Medicare-eligible retirees, retiree family members, and survivors, regardless of age. The fund covers care in MTFs and by Designated Providers (through the Uniformed Services Family Health Plan) and supports purchased care payments through the TRICARE for Life benefit first implemented in FY 2002. The future healthcare liability accrued prior to October 1, 2002 is funded by the US Department of the Treasury and is not included in the UMP.

[12] NDAA for FY 2013, Sections 3001, 3004, and 8123.

[13] DoD, "Defense Budget Priorities and Choices," January 2012.

medical spending for dual-eligible beneficiaries (i.e., beneficiaries eligible for both TRICARE and Medicare);[14]

- DoD's full implementation of a program to collect refunds from drug manufacturers at retail pharmacies;
- DoD's implementation of Section 708 of the NDAA for FY 2012, which disallowed new enrollments of military retirees age 65 and older in the Uniformed Services Family Health Plan (USFHP);[15] and
- A drop in supplemental funding for Overseas Contingency Operations (OCO).



Sources: Bannick et al., *Evaluation of the TRICARE Program*, 2014 and 2015.

Figure 1. Recent Trend in UMP Expenditures (Then-Year Dollars)

In FY 2014, the UMP increased, despite further reductions in MERHCF and OCO expenditures. The direct care program (including in-house care plus other direct care

[14] Congressional Budget Office (CBO), "Costs of Military Pay and Benefits in the Defense Budget," November 2012.

[15] The USFHP is an additional TRICARE Prime option available through networks of community-based, not-for-profit healthcare systems in six areas of the United States.

operations and maintenance expenses, but excluding military personnel working in the direct care system) accounted for 36 percent of the UMP; private sector care, 30 percent; military personnel, 17 percent; military construction, 2 percent; and the MERHCF, 15 percent. While MERHCF contributions may continue to decline with the drawdown in end-strength, the other factors that produced the temporary drop in 2013 have not altered the increasing trends in the three largest expenditure categories (i.e., the combined total of direct care, purchased care, and military personnel). In addition, total per capita healthcare costs continue to increase annually.[16]

B. The Full Cost of Care

The full cost of care includes additional military manpower costs not reflected in the budget plus the cost of medical malpractice claims against the Service Departments. Although these two items are not reflected in the PB as attributed to military healthcare, they are nevertheless costs to the government. Military medical personnel[17] account for about one-third of total budgeted expenses for direct care. The salaries used in the Medical Expense and Performance Reporting System (MEPRS) are based on the DoD military personnel composite standard pay rates provided by the USD(C).[18] The USD(C) has directed that the composite rates be used when determining military personnel costs in management and budget studies. However, the composite rates are Service-specific averages across all military occupations by pay grade and do not reflect the often-higher special pays, allowances, and education expenses of medical personnel, particularly physicians.

DoD Instruction 7041.04 directs DoD components to estimate the fully burdened cost of manpower when making force-mix decisions.[19] A recent IDA paper[20] updated burdening factors estimated from the Medical Readiness Review[21] and applied them to

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16 "Total per capita healthcare costs" refers to the sum of inpatient, outpatient, and prescription costs per beneficiary. See Bannick et al., *Evaluation of the TRICARE Program* for FY 2014 and FY 2015.

17 Medical personnel include clinicians (physicians, dentists, interns/residents), other medical providers (e.g., physician assistants, nurse practitioners), registered nurses, and para-professionals (e.g., licensed practical nurses, laboratory and radiology technicians). Administrative personnel are excluded.

18 The composite rates, adjusted annually, include average basic pay, retired pay accrual, MERHCF accrual, basic allowances for housing and subsistence, incentive and special pays, PCS expenses, and miscellaneous pay.

19 DoD Instruction 7041.04, "Estimating and Comparing the Full Costs of Civilian and Active Duty Military Manpower and Contract Support," July 3, 2013.

20 John E. Whitley et al., "Medical Total Force Management," IDA Paper P-5047 (Alexandria, VA: Institute for Defense Analyses, May 2014).

21 DoD, "Final Report: DoD Force Health Protection and Readiness—A Summary of the Medical Readiness Review, 2004-2007" (Washington, DC: DoD, 2008).

estimate the full cost of military manpower. These factors will be used when applicable in this paper to estimate the true cost of medical personnel to DoD.

Current law does not allow ADSMs to file claims for medical malpractice for their own treatment in an MTF or by a military provider (although they can file on behalf of a family member who was injured or died due to malpractice). Other TRICARE beneficiaries can file medical malpractice claims, but they must be filed against the Military Departments, not individual providers. Judicially or administratively ordered awards of at least $2,500 are paid by the US Department of the Treasury Judgment Fund; smaller awards are paid by the Military Departments themselves. The Judgment Fund is a permanent, indefinite appropriation available to pay court judgments and Department of Justice compromise settlements of actual or imminent lawsuits against the government.

C. DoD Healthcare Costs

The cost of direct care is borne almost entirely by DoD; beneficiary out-of-pocket expenses are either nil or minimal. Because DoD does not bill beneficiaries who use direct care, it does not generate claims data, as do the managed care support contractors. Instead, it allocates expenses to direct care inpatient hospitalization and outpatient encounter records (available in the MHS Data Repository (MDR) and the Military Health System Management and Analysis Reporting Tool (M2)) using data from MEPRS.[22] Expenses are broken down into full and variable costs,[23] which are further subdivided into costs for physician and non-physician salaries, ancillary services (such as laboratory and radiology), pharmacy, and other factors. MEPRS expenses must be offset by third-party collections (i.e., reimbursements from commercial insurers for those with private health insurance), which are processed by the MTFs and reported to the Services.

FY 2013 UMP funding totaled $48.41 billion. Part of this total can be considered the direct cost of providing in-house and purchased healthcare; the remainder can be considered central overhead, administrative, and readiness (in the case of direct care) costs. We define direct healthcare costs from MEPRS, using Functional Cost Codes (FCCs), as all A (Inpatient), B (Outpatient), C (Dental), FBI (Immunizations), FCC (Support to Non-Federal External Providers), FCD (Support to Other Military Medical Activities), and FCE (Support to Other Federal Agencies) account costs, less third-party collections. The FCD account records the costs associated with personnel loaned from one MTF to another and prescriptions written by a physician at one MTF but filled by the

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[22] See Appendix A for a description of the MHS data used in this paper.

[23] There is no consensus among the Office of the Assistant Secretary of Defense for Health Affairs (OASD(HA)) and the Services about which expenses are variable and what percentage of the full expense is considered variable. For most cost elements, the variable portion seems to be set at about 80 percent.

pharmacy at another. In the former situation, the costs are also recorded in the A and/or B accounts of the borrowing MTFs, so they will be double-counted if simply added together across MTFs. To avoid double-counting, we determined the personnel costs associated with the FCD account loaned labor using data obtained from the Expense Assignment System Version IV (EAS IV) Repository. Those costs were then subtracted from the total FCD cost.

Purchased healthcare costs include all costs paid by TRICARE for inpatient, outpatient, and prescription drug services (both retail and home delivery) as reflected in the purchased care claims data. We excluded claims for non-DoD beneficiaries (Coast Guard, Public Health Service, and National Oceanic and Atmospheric Administration) and for both TRICARE Young Adult and TRICARE Retired Reserve because those programs are budget-neutral (i.e., they are fully paid by beneficiary premiums). We then added DoD's costs for the TRICARE Dental Program and the USFHP because they are not included in the claims data. To make total purchased healthcare costs commensurate with the budget data, we subtracted out the refunds received by DoD for brand-name retail drugs.[24]

D. Cost Comparisons

Figure 2 shows side-by-side comparisons of the total amount budgeted for direct care (less RDT&E, which is almost entirely readiness-related) and purchased care against the healthcare portion of the cost (determined from MEPRS, not the PB) in FY 2013. To more accurately represent what is spent by the DHP for the care of the *current* Medicare-eligible retiree population (including Medicare-eligible family members), we display the actual receipts from the MERHCF[25] rather than the DoD normal cost contribution. A further advantage to using MERHCF receipts is that they are already broken out by direct and purchased care sources.

The left-most bar (labeled "Full Cost") includes an $81 million Judgment Fund payout for medical malpractice awards and an increment to budgeted MILPERS expenses that reflects the full cost of military personnel to the government (not just to DoD). We

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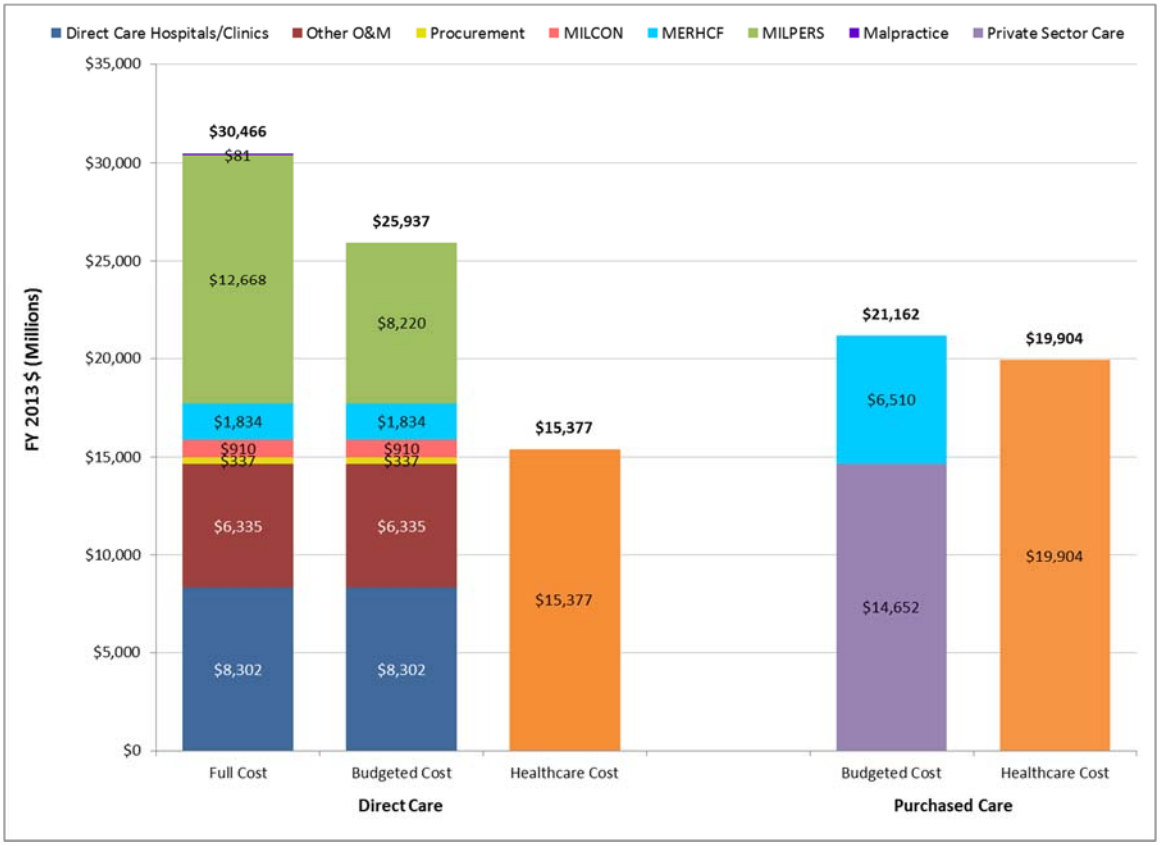
[24] The NDAA for FY 2008 mandated that the TRICARE retail pharmacy program be treated as an element of DoD and, as such, be subject to the same pricing standards as other federal agencies. As a result, drug manufacturers began providing refunds to DoD on most brand-name retail drugs beginning in FY 2008.

[25] Under Secretary of Defense (Comptroller), *Defense-Wide Budget Documentation – FY 2015*. Available from the USD(C) website at http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2015/budget_justification/pdfs/09_Defense_Health_Program/VOL_I_Sec_8_PB-11_Cost_of_Medical_Activities_DHP_PB15.pdf.

determined the increment by applying a factor derived from IDA Paper P-5047[26] to budgeted MILPERS expenses. That research estimated the full cost of manpower for almost all DoD medical occupations, both officer and enlisted, and estimated a single factor for all DoD non-medical occupations (e.g., laundry services, security, administration). The load factor we applied (0.54) is a weighted average across all DoD occupations—where the weights are the MILPERS expenses for each DoD occupation—but excludes education and training costs[27] because they are already reflected in the UMP.



Sources: USD(C), *Defense-Wide Budget Documentation – FY 2015*, Vol. 1, Sec. 8; PB-11 Cost of Medical Activities DHP PB15; MEPRS; and M2.

Note: The bars labeled "Budgeted Cost," "Full Cost," and "Healthcare Cost" are defined in Sections A, B, and C of this chapter, respectively.

Figure 2. Characterizations of Cost by Source of Care – FY 2013

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26 Whitley et al., "Medical Total Force Management."

27 Education and training costs are included in the "Other O&M" portion of the "Full Cost" and "Budgeted Cost" bars in Figure 2.

Note that not all budgeted costs can be cleanly allocated to direct or purchased care. For example, centralized management activities are devoted to the management of both direct and purchased care, but we cannot determine the split. Note also that purchased care contractors collect Prime enrollment fees and other program premiums that are paid by enrolled beneficiaries. Those collections offset the contractors' costs and are reflected in the budgeted costs for purchased care in Figure 2.

3. Comparing Direct Care with Purchased Care Costs

TRICARE continues to face opportunities and challenges in structuring the delivery of care to reduce costs without compromising the quality of care. The challenges are exacerbated by the unsustainable portion of the DoD budget that healthcare expenditures are consuming. To enhance our understanding of the costs of delivering the TRICARE benefit as it is now constituted, IDA compared the costs of direct and purchased care for the same level and types of services. Cost is just one component of the benefit delivery issue; any change to how care is delivered could have consequences for the proficiency of the military medical force, quality of care, and the medical readiness of the Active Duty force. Accounting for the cost and constraints of various benefit delivery alternatives has been the subject of previous "make vs. buy" and MTF efficiency studies, but this section is limited to the consideration of the relative costs of direct and purchased care.

A. Some Previous Studies Addressing Benefit Delivery

DoD periodically performs or sponsors studies that examine ways of improving the overall efficiency and effectiveness of its healthcare business and clinical operations. Many of these studies focus on ways of lowering costs to the government without compromising the quality of beneficiary care. One such approach is to evaluate whether it is more cost-effective to produce care in-house or to purchase it from the private sector. The most extensive "make vs. buy" study was the IDA-led portion of the "Section 733" study,[28] performed in the pre-TRICARE era. In a follow-up effort,[29] the Center for Naval Analyses (CNA) compared the actual costs of in-house care to the hypothetical costs of purchasing the same volume of care in the private sector. These two studies concluded that it was generally less expensive for DoD to produce care in-house. At about the same time, the TRICARE Management Activity (TMA) conducted a similar study concluding

[28] Matthew Goldberg et al., "Cost Analysis of the Military Medical Care System: Final Report," IDA Paper P-2990 (Alexandria, VA: Institute for Defense Analyses, September 1994).

[29] Matthew Goldberg, Viki Johnson, and James Grefer, "Comparing the Costs of Military Treatment Facilities and Purchased Care," CNA Annotated Briefing D0008602.A3 (Alexandria, VA: Center for Naval Analyses, November 2003).

the exact opposite, i.e., that it was generally less expensive to purchase care from the private sector.[30]

The above-referenced studies produced conflicting results because they approached their analyses from different perspectives and used different data sources. The IDA and CNA studies considered the total cost to produce a given level of services whereas the TMA study considered the cost to DoD, taking account of the beneficiary cost shares collected in purchased care. Results also varied depending on the costs that were considered and on whether costs were measured on a per-case or per-person basis.

Related studies, focusing more on MTF efficiency, were performed by Ozcan and Bannick[31] and by Goldberg, Jaditz, and Johnson.[32] Those studies attempted to measure the efficiency of an MTF relative to its "peers" using a technique called data envelopment analysis (DEA). The DEA analysis allows each MTF to be assigned an efficiency score based on a comparison with a peer or an optimal combination of MTF peer outputs that minimizes cost.

All of the above analyses were hindered by a lack of detailed data on workload and costs. As the quality and completeness of those data have improved substantially since those studies were conducted, we are able to estimate relative costs with greater precision than was possible before.

The approach we use in this paper to measure MTF efficiency is to price each MTF's workload at purchased care rates and compare the resultant cost with the actual MTF cost. Efficiency is then measured as the purchased care cost of producing an MTF's workload divided by the actual cost. There is no upper bound on efficiency under this approach but an MTF's efficiency can still be compared relative to other MTFs of similar size, resources, and workload. So, for example, an MTF that makes inefficient use of resources (e.g., manpower) would have a higher cost per unit of workload than a comparable MTF that produces more workload with similar resources. When priced at purchased care rates, the inefficient MTF would have a lower efficiency "score" than the other.

One advantage of this approach is that we do not have to define peer comparison groups for each MTF. As long as we can find comparable workload being performed in

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30 TRICARE Management Activity (TMA)/Health Program Analysis and Evaluation 2003. Not publicly available.

31 Yasar A. Ozcan and Richard R. Bannick, "Trends in Department of Defense Hospital Efficiency," *Journal of Medical Systems* 18, No. 2 (1994): 69–83.

32 Matthew Goldberg, Ted Jaditz, and Viki Johnson, "Efficiency Analysis of Military Medical Treatment Facilities," CNA Annotated Briefing D0004561.A2 (Alexandria, VA: Center for Naval Analyses, October 2001).

the vicinity of each MTF, we can be less concerned about comparing MTFs with different health service mixes. Another advantage is that we could make procedure-specific efficiency comparisons if we wished.

B. Cost Comparisons

TRICARE provides care to its eligible beneficiaries in two broad settings: a system of DoD hospitals, clinics, and pharmacies; and a system of network and non-network participating civilian healthcare professionals, institutions, pharmacies, and suppliers. DoD purchases care from the private sector because the direct care system does not have the capacity to care for all 9.5 million eligible beneficiaries, and MTFs may sometimes lack the equipment and/or sufficient personnel with the requisite skills to perform certain procedures. Although cost is not the driving factor behind DoD's use of private sector care, it is logical to ask, especially in times of tight budgets, whether it is less expensive to deliver care in-house or in the private sector. The answer to this question likely depends on the type of service being provided, the time horizon of the analysis (short-term versus long-term), and where the care is provided, as some MTFs are more efficient than others.

To make a fair comparison between direct and purchased care costs, we valued the cost of each direct care procedure at the cost for the same procedure in the private sector. This ensures we are comparing costs for the same type and level of workload. Because inpatient and outpatient procedure costs can vary widely by geographic location, we re-priced each MTF's workload using only data within the vicinity of the MTF. Our goal was to account for at least 90 percent of direct care inpatient and outpatient costs by matching procedures within a fixed geographical radius. A match rate much higher than 90 percent is unrealistic, as MTFs perform military-unique services (e.g., annual flight physicals) that typically are not performed in the private sector. We considered 20-, 40-, 50-, 75-, and 100-mile radii and settled on a 50-mile radius as the optimum. Below 50 miles, the matching percentage was well below 90 percent for outpatient services at many MTFs; above 50 miles, the incremental improvement to the matching percentage was minimal.

Microeconomic theory provides three basic estimates that we can use in our cost comparisons: average total cost (ATC), average variable cost (AVC), and marginal cost (MC), all of which we can estimate over different time horizons (e.g., long-run and short-run). Understanding these estimates in purchased care is relatively straightforward. The average and marginal costs of a procedure are generally similar because DoD is usually a relatively small buyer in the heavily-traded healthcare market. There is also relatively little variation in the three types of estimates over different time horizons. Once we include contract overhead, the cost estimates we make for purchased care most closely

reflect ATC, but there is relatively little difference between those estimates and what we would likely estimate for AVC or MC if we focused on them instead.

Obtaining commensurate cost estimates for the direct care system is much harder because that system has significant fixed costs over short and intermediate time horizons and cost accounting systems that do not capture most overhead costs. Given those challenges, our estimates did not include military construction, procurement, or the additional factors discussed in Chapter 2 that comprise the full cost of delivery. We therefore did not estimate ATC for direct care. However, we did include many operating expenses and labor (both military and civilian), which constitute the major variable costs (over all but the very shortest time horizons) in the direct care system—but not all.

The costs we considered in this chapter are limited to the healthcare portion of the total, i.e., they corresponded to the "Healthcare Cost" estimates shown in Figure 2 on page 12. We did not consider direct care program expenses such as MHS IM/IT which, even though they are operating expenses, are not allocated to individual units of care in the direct care cost accounting system. Our estimates are thus most closely reflective of AVC, but may understate it some. These estimates are also probably very close to MC, although we did not specifically model the cost functions in the direct care system to test this hypothesis. Our direct care cost estimates are significantly less than ATC and, since that is what we use for purchased care, represent a conservative comparison from the perspective of underestimating the costs in MTFs.

Because healthcare costs can vary by locality, we confined our procedure matching for each MTF to only those private sector facilities that fell within a 50-mile radius. We then computed the total value of an MTF's workload by applying the average purchased care cost per unit of workload for each procedure to the MTF's workload for the same procedure and summing across all procedure codes, i.e.,

$$TC_{PC}^{DC} = \sum_{i=1}^{n} w_i^{DC} \cdot \left(TC_i^{PC} / w_i^{PC} \right),$$

where TC_{PC}^{DC} is total direct care workload valued at purchased care rates, w_i^{DC} is the total direct care workload weight for procedure *i*, TC_i^{PC} is the total purchased care cost for procedure *i*, and w_i^{PC} is the total purchased care workload weight for procedure *i*.

In the sections that follow, we consider two different ways of measuring MTF efficiency relative to the private sector. The first prices MTF workload at total private sector rates, regardless of payer (DoD, beneficiary, and other health insurance (OHI)). This measure is most useful for comparing the efficiency of one MTF to another, conditional on the workload they produce. The second prices MTF workload at only DoD's share of private sector costs. This is more appropriate for measuring the efficiency of care management as it considers the effect of beneficiary copays and OHI in

determining the most cost-effective way of delivering care.[33] The latter measure is also useful for informing "make vs. buy" analyses.

1. Inpatient Cost Comparisons

a. Comparisons by Facility

For inpatient care, we used two measures of workload: Relative Weighted Products (RWPs) for non-mental health Diagnosis-Related Groups (DRGs) and bed-days for mental health DRGs.[34] Inpatient professional services costs[35] are already included in the direct care inpatient records and cannot be broken out separately from hospital costs. We therefore had to make sure to include them on the purchased care side as well. To do this, we matched each purchased care inpatient professional services record in the non-institutional claims file with its corresponding record in the institutional claims file (using a record identifier in both files that enables the match) and summed the costs.

We valued the inpatient workload for each of the 41 domestic DoD hospitals at purchased acute care hospital rates, matching each direct care DRG with the corresponding one within a 50-mile radius around each MTF. In some cases, no matching DRG was found but, overall, 93 percent of direct care inpatient expenses were accounted for by matching DRGs. For non-matching DRGs, we applied the ratio of total direct care inpatient costs to total matching direct care inpatient costs as a scale factor to inflate the total value of inpatient care.

The DoD share of private sector costs depends on the beneficiary category, enrollment status, and Medicare eligibility of the individual receiving care. From purchased care claims data, we calculated the average DoD shares of inpatient and professional services costs. The results are shown in Table 1.

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[33] Transferring care from a direct to a purchased care setting or vice versa can also have an effect on beneficiary utilization. However, IDA has found that this effect is small. Most Active Duty family members are enrolled in Prime and have minimal or no out-of-pocket costs in either direct or purchased care settings. Deductibles and copays have a small deterrent effect on the utilization of retirees and family members not enrolled in Prime but, when that effect is averaged in with those for other beneficiary groups, the overall effect is small.

[34] See Appendix A for a description of DRGs and RWPs.

[35] These are services rendered directly to a patient by a medical provider in a hospital setting. For purchased care, they are billed separately from the hospital's charges and are contained in the non-institutional claims file.

Table 1. Average DoD Shares of Purchased Care Inpatient Costs

Beneficiary Category	Enrollment Status[a]	Medicare Eligibility	DoD Share of Cost	
			Hospital	Inpatient Prof. Services
Active Duty			100.0%	99.9%
Active Duty Family Members	Enrolled	No	96.8%	97.9%
Active Duty Family Members	Non-enrolled	No	96.0%	96.1%
Retirees and Family Members	Enrolled	No	94.3%	96.6%
Retirees and Family Members	Non-enrolled	No	79.6%	79.3%
Retirees and Family Members		Yes	17.7%	20.4%

[a] Enrolled includes TRICARE Prime and TRICARE Prime Remote; all others are considered non-enrolled. USFHP enrollees were excluded from the calculations for lack of data on costs.

Table 2 compares actual direct care inpatient costs by MTF with the costs of the same workload if purchased from the private sector. We applied the factors shown in the last two columns of Table 1 to the total private sector costs for each beneficiary group to obtain the overall DoD share.

Table 2. Direct Care Inpatient Costs and Value of Care by MTF ($ Thousands)

Facility	Service	Actual Direct Care Cost	Total Value of Direct Care Workload	DoD Share of Value of Direct Care Workload
Bassett ACH-Ft. Wainwright	Army	$18,194	$23,109	$21,755
673rd Medical Group-Elmendorf	Air Force	$29,339	$33,292	$25,557
60th Medical Group-Travis*	Air Force	$99,611	$84,488	$43,333
NH Camp Pendleton*	Navy	$37,400	$27,311	$24,398
NH Lemoore	Navy	$7,002	$3,008	$2,909
NMC San Diego*	Navy	$199,773	$174,377	$138,055
NH Twentynine Palms	Navy	$11,858	$7,780	$7,400
Evans ACH-Ft. Carson	Army	$37,356	$33,229	$30,422
NH Pensacola*	Navy	$31,181	$13,748	$9,722
NH Jacksonville*	Navy	$42,368	$20,169	$17,439
96th Medical Group-Eglin*	Air Force	$35,013	$21,887	$17,222
Eisenhower AMC-Ft. Gordon*	Army	$62,536	$44,936	$27,074
Martin ACH-Ft. Benning*	Army	$32,227	$19,864	$18,024
Winn ACH-Ft. Stewart	Army	$25,927	$16,983	$15,817
Tripler AMC-Ft Shafter*	Army	$189,519	$133,795	$101,741
366th Medical Group-Mountain Home	Air Force	$5,235	$1,793	$1,686
Irwin ACH-Ft. Riley	Army	$14,211	$12,441	$12,016
Blanchfield ACH-Ft. Campbell	Army	$32,490	$20,702	$19,171

Facility	Service	Actual Direct Care Cost	Total Value of Direct Care Workload	DoD Share of Value of Direct Care Workload
Ireland ACH-Ft. Knox	Army	$15,593	$8,034	$7,434
Bayne-Jones ACH-Ft. Polk	Army	$14,727	$6,604	$6,289
Walter Reed NMMC*	JTF CapMed	$355,780	$187,783	$138,598
81st Medical Group-Keesler*	Air Force	$40,787	$23,667	$12,490
L. Wood ACH-Ft. Leonard Wood	Army	$18,455	$28,666	$25,497
99th Medical Group-O'Callaghan*	Air Force	$34,624	$29,909	$18,959
Keller ACH-West Point*	Army	$13,475	$6,825	$6,667
Womack AMC-Ft. Bragg*	Army	$95,095	$56,150	$47,251
NH Camp Lejeune*	Navy	$44,697	$52,204	$49,062
88th Medical Group-Wright-Patterson*	Air Force	$40,667	$24,790	$15,437
Reynolds ACH-Ft. Sill	Army	$18,671	$9,318	$8,358
NH Beaufort	Navy	$6,341	$2,799	$2,742
Moncrief ACH-Ft. Jackson	Army	$10,039	$6,156	$5,985
William Beaumont AMC-Ft. Bliss*	Army	$105,180	$70,132	$50,918
San Antonio MMC-Ft. Sam Houston*	Army	$427,670	$230,226	$159,906
Darnall AMC-Ft. Hood*	Army	$78,265	$55,534	$52,030
633rd Medical Group Langley-Eustis	Air Force	$27,717	$15,272	$13,839
Ft. Belvoir Community Hospital	JTF CapMed	$109,238	$50,966	$41,636
NMC Portsmouth*	Navy	$211,278	$120,394	$106,419
Madigan AMC-Ft. Lewis*	Army	$162,350	$128,542	$93,548
NH Bremerton*	Navy	$25,141	$14,025	$11,148
NH Oak Harbor	Navy	$6,662	$3,136	$3,027
Weed ACH-Ft. Irwin	Army	$8,382	$18,791	$18,189
Total		**$2,782,074**	**$1,842,835**	**$1,429,167**

* These sites offer some form of Graduate Medical Education (GME). There is considerable variation in the scope and size of GME programs at these facilities.

Abbreviations:
ACH = Army Community Hospital
AMC = Army Medical Center
JTF CapMed = Joint Task Force National Capital Region Medical
MMC = Military Medical Center
NH = Navy Hospital
NMC = Navy Medical Center
NMMC = National Military Medical Center

Of the 41 domestic DoD hospitals, 36 would have had lower inpatient costs had they been able to provide care at the same cost per episode as the private sector. Note that

since medical centers have higher costs due to the teaching and research nature of those facilities, and since they are being compared mostly with civilian community hospitals, they are more likely to show a larger discrepancy in costs. Overall, the cost of providing direct care inpatient workload at the 41 domestic DoD hospitals would have been 34 percent lower had the workload been performed in private sector facilities. If only the cost to DoD is considered, the cost would have been 49 percent lower. Actual direct care costs and the discrepancy between the former and the value of direct care workload would have been even larger had we taken into account the full cost of military manpower, facility construction costs, and program overhead.

b. Comparisons by Major Diagnostic Category

In this section, we compare direct with purchased care inpatient costs by Major Diagnostic Category (MDC). The basis for the MDCs is the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM), a system of diagnostic codes for classifying diseases, which includes classifications for a wide range of morbidity and mortality conditions. The MDC list used by the MHS includes the mutually-exclusive categories shown in Table 3. The list applies to both inpatient and outpatient primary diagnoses.

Table 3. List of Major Diagnostic Categories

MDC	Description
00	Unknown
01	Diseases and Disorders of the Nervous System
02	Diseases and Disorders of the Eye
03	Diseases and Disorders of the Ear, Nose, Mouth, and Throat
04	Diseases and Disorders of the Respiratory System
05	Diseases and Disorders of the Circulatory System
06	Diseases and Disorders of the Digestive System
07	Diseases and Disorders of the Hepatobiliary System and Pancreas
08	Diseases and Disorders of the Musculoskeletal System and Connective Tissue
09	Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast
10	Endocrine, Nutritional and Metabolic Diseases and Disorders
11	Diseases and Disorders of the Kidney and Urinary Tract
12	Diseases and Disorders of the Male Reproductive System
13	Diseases and Disorders of the Female Reproductive System
14	Pregnancy, Childbirth, and the Puerperium
15	Newborns and Other Neonates with Conditions Originating in Perinatal Period
16	Diseases and Disorders of the Blood, Blood Forming Organs, Immunological Disorders
17	Myeloproliferative Diseases and Disorders, Poorly Differentiated Neoplasms
18	Infectious and Parasitic Diseases, Systemic or Unspecified Sites
19	Mental Diseases and Disorders
20	Alcohol/Drug Use and Alcohol/Drug Induced Organic Mental Disorders
21	Injuries, Poisonings and Toxic Effects of Drugs
22	Burns
23	Factors Influencing Health Status and Other Contacts with Health Services
24	Multiple Significant Trauma
25	Human Immunodeficiency Virus Infections

We compare the average costs by MDC for direct and purchased care in Table 4. This is not to be confused with a per-capita cost comparison, which would reduce the cost of purchased care because copayments for the latter reduce beneficiary utilization.

Table 4. Direct Care Inpatient Costs and Value of Care by MDC ($ Thousands)

Major Diagnostic Category	Actual Direct Care Cost	Total Value of Direct Care Workload	DoD Share of Value of Direct Care Workload
Diseases and Disorders of the Nervous System	$127,161	$82,243	$56,839
Diseases and Disorders of the Eye	$6,240	$4,346	$3,297
Diseases and Disorders of the Ear, Nose, Mouth, and Throat	$54,437	$44,853	$38,558
Diseases and Disorders of the Respiratory System	$168,017	$107,697	$62,886
Diseases and Disorders of the Circulatory System	$297,589	$204,430	$103,991
Diseases and Disorders of the Digestive System	$254,734	$155,635	$114,926
Diseases and Disorders of the Hepatobiliary System and Pancreas	$75,721	$48,237	$36,522
Diseases and Disorders of the Musculoskeletal System and Connective Tissue	$290,160	$221,728	$170,014
Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast	$80,619	$52,206	$39,610
Endocrine, Nutritional and Metabolic Diseases and Disorders	$88,937	$57,799	$45,269
Diseases and Disorders of the Kidney and Urinary Tract	$74,840	$53,937	$29,792
Diseases and Disorders of the Male Reproductive System	$13,987	$10,215	$6,658
Diseases and Disorders of the Female Reproductive System	$70,982	$49,307	$45,291
Pregnancy, Childbirth, and the Puerperium	$437,606	$286,943	$279,128
Newborns and Other Neonates with Conditions Originating in Perinatal Period	$287,805	$161,709	$155,033
Diseases and Disorders of the Blood, Blood Forming Organs, Immunological Disorders	$27,720	$21,673	$14,124
Myeloproliferative Diseases and Disorders, Poorly Differentiated Neoplasms	$33,527	$22,867	$17,501
Infectious and Parasitic Diseases, Systemic or Unspecified Sites	$76,378	$46,143	$26,478
Mental Diseases and Disorders	$108,531	$76,314	$70,944
Alcohol/Drug Use and Alcohol/Drug Induced Organic Mental Disorders	$35,364	$22,237	$20,448
Injuries, Poisonings and Toxic Effects of Drugs	$48,198	$30,738	$24,958
Burns	$26,768	$8,252	$6,367
Factors Influencing Health Status and Other Contacts with Health Services	$31,031	$25,165	$18,110
Multiple Significant Trauma	$33,129	$14,083	$11,490
Human Immunodeficiency Virus (HIV) Infections	$465	$472	$378
Total*	**$2,749,945**	**$1,809,229**	**$1,398,612**

* The totals in this table are slightly lower than the ones in Table 2 because they exclude DRGs that are not classifiable into any MDC.

In terms of total cost, by far the most common direct care MDCs are related to pregnancy, childbirth, and newborn care. Those MDCs alone account for 27 percent of total inpatient expenditures at domestic DoD hospitals. If valued at private sector rates, however, direct care is 61 percent more costly than purchased care (68 percent more if only the cost to DoD is considered) for the same level and intensity of workload. In fact, direct care is more costly than purchased care for every MDC except HIV infections, but the latter accounts for a negligible portion of total inpatient expenditures.

2. Outpatient Cost Comparisons

a. Comparisons by Facility

For outpatient care we used two measures of workload: Relative Value Units (RVUs) for non-facility procedures and Ambulatory Payment Classification (APC) weights for facility procedures.[36] We valued outpatient direct care in much the same way as for inpatient care, with some notable exceptions. First, the costs allocated from MEPRS to direct care encounter records include stepped-down pharmacy, laboratory, radiology, and other ancillary costs. In the private sector, prescription drug costs are not included in the cost of a procedure (i.e., prescriptions written by a provider to be filled at an outpatient pharmacy) and ancillary costs are usually billed under separate procedure codes. To make direct and purchased care costs more comparable, we backed out pharmacy and ancillary costs from the MEPRS total. M2 includes separate tables for stepped-down laboratory and radiology services so we were able to include them as additional procedures in the comparisons. Second, there are up to 13 procedure codes (including up to three evaluation and management codes) recorded on each direct care non-facility encounter record along with their corresponding RVUs and the overall episode cost. Facility records may also contain up to 13 procedure codes in addition to an APC aggregate weight and a composite workload measure (i.e., a weighted sum of total RVUs and APCs). To assign a cost to each procedure/APC code, we allocated the overall cost by the percentage of the composite weight accounted for by the procedure/APC. See Appendix B for details of the allocation methodology.

Because there are over 300 ambulatory care clinics (including those co-located at military hospitals), including troop clinics (largely conducting sick call) and other stand-

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[36] The facility/non-facility designation refers to where the medical services are performed. Facility records contain information on procedures performed in an outpatient hospital (primarily ambulatory surgery centers and emergency rooms) and include measures of the workload performed by both the hospital (equipment, beds, drugs, nursing staff, etc.) and the physician or other clinician performing the medical or surgical procedure(s). Non-facility records contain information on procedures performed in a doctor's office or clinic. APC weights apply only to facility workload, whereas RVUs vary depending on where the services are performed (facility or non-facility). See Appendix A for a description of RVUs and APC weights.

alone clinics with small workload levels, we aggregated all "child" clinic workload and costs in the United States to their parent facility. This reduced the number of clinics under consideration to 109. We then valued the non-facility outpatient workload at purchased care rates for each domestic DoD clinic reporting outpatient workload, matching each direct care procedure with the corresponding one at private sector facilities located within a 50-mile radius of each MTF. We selected a 50-mile radius as our search area because it resulted in a high match rate (93 percent overall) between the large number of procedures performed at many MTFs and those performed in the surrounding area. As with the inpatient cost analysis, we applied the ratio of total direct care outpatient costs to total matching direct care outpatient costs as a scale factor to inflate the total value of outpatient care.

To value facility workload, we were unable to apply a methodology analogous to the one we used for non-facility workload because APC weights are not recorded in the purchased care claims data. We therefore applied a single cost factor ($71.31 per APC weight) obtained from the Office of the Assistant Secretary of Defense for Health Affairs [OASD(HA)] to direct care APCs to value facility workload.

The DoD share of private sector costs depends on the beneficiary category, enrollment status, and Medicare eligibility of the individual receiving care. From purchased care claims data, we calculated the average DoD shares of outpatient encounter, laboratory, radiology, and facility costs. The results are shown in Table 5.

Table 5. DoD Shares of Purchased Care Outpatient Costs

Beneficiary Category	Enrollment Status[a]	Medicare Eligibility	DoD Share of Cost			
			Encounter	Lab	Rad	Facility
Active Duty			99.9%	99.9%	99.9%	100.0%
Active Duty Family Members	Enrolled	No	96.7%	97.8%	97.8%	97.0%
Active Duty Family Members	Non-enrolled	No	84.9%	85.2%	85.3%	86.9%
Retirees and Family Members	Enrolled	No	89.8%	96.8%	95.8%	93.1%
Retirees and Family Members	Non-enrolled	No	67.6%	69.6%	69.7%	70.0%
Retirees and Family Members		Yes	22.4%	12.6%	24.4%	20.3%

[a] *Enrolled* includes TRICARE Prime and TRICARE Prime Remote; all others are considered non-enrolled. USFHP enrollees were excluded from the calculations for lack of data on costs.

Table 6 compares actual direct care outpatient costs by parent MTF (i.e., workload for all child MTFs are rolled up to the parent level) with the costs of the same workload if

purchased from the private sector. We applied the factors shown in the last four columns of Table 5 to the total private sector costs for each beneficiary group to obtain the overall DoD share. For economy of presentation, we show only those parent facilities with more than $50 million in outpatient workload. The results for all 109 parent facilities are provided in Appendix C.

Table 6. Direct Care Outpatient Costs and Value of Care by Parent MTF ($ Thousands)

Parent Facility	Service	Actual Direct Care Cost	Total Value of Direct Care Workload	DoD Share of Value of Direct Care Workload
Bassett ACH - Ft. Wainwright	Army	$54,872	$48,646	$46,662
673rd Med Grp - Elmendorf	Air Force	$66,317	$74,523	$66,378
60th Med Grp - Travis	Air Force	$109,109	$66,959	$46,543
NH Camp Pendleton	Navy	$145,801	$96,764	$91,724
NMC San Diego	Navy	$400,348	$248,267	$213,512
Evans ACH - Ft. Carson	Army	$143,256	$117,060	$108,337
NH Pensacola	Navy	$114,278	$63,424	$55,736
NH Jacksonville	Navy	$125,923	$83,925	$76,926
96th Med Grp - Eglin	Air Force	$71,913	$50,559	$44,164
Eisenhower AMC - Ft. Gordon	Army	$132,615	$88,342	$74,203
Martin ACH - Ft. Benning	Army	$104,336	$91,329	$87,171
Winn ACH - Ft. Stewart	Army	$92,029	$67,708	$64,715
Tripler AMC - Ft. Shafter	Army	$277,654	$185,575	$165,905
Irwin ACH - Ft. Riley	Army	$77,616	$57,176	$55,370
Blanchfield ACH - Ft. Campbell	Army	$123,729	$93,348	$89,349
Ireland ACH - Ft. Knox	Army	$86,739	$57,536	$53,397
Bayne - Jones ACH - Ft. Polk	Army	$52,199	$28,161	$26,836
779th Med Grp - Andrews	Air Force	$62,229	$33,802	$29,836
Walter Reed Nat Mil Med Ctr	JTF CapMed	$536,645	$183,152	$148,634
Kimbrough ACC - Ft. Meade	Army	$83,801	$45,609	$41,634
81st Med Grp - Keesler	Air Force	$65,851	$52,069	$37,337
L. Wood ACH - Ft. Leonard Wood	Army	$67,714	$58,556	$55,635
99th Med Grp - O'Callaghan Hosp	Air Force	$82,081	$59,481	$46,691
Womack AMC - Ft. Bragg	Army	$221,271	$155,330	$144,934
NH Camp Lejeune	Navy	$126,098	$77,137	$74,306
88th Med Grp - Wright - Patterson	Air Force	$90,340	$53,829	$42,921
Reynolds ACH - Ft. Sill	Army	$70,480	$59,099	$55,320
Naval Health Clinic New England	Navy	$67,971	$21,605	$20,089
NH Beaufort	Navy	$59,662	$32,226	$31,041
Moncrief ACH - Ft. Jackson	Army	$62,247	$38,403	$36,241
William Beaumont AMC - Ft. Bliss	Army	$175,978	$123,950	$112,213
Brooke AMC-Ft. Sam Houston	Army	$322,357	$208,170	$162,935
Darnall AMC - Ft. Hood	Army	$196,724	$170,256	$163,793

Parent Facility	Service	Actual Direct Care Cost	Total Value of Direct Care Workload	DoD Share of Value of Direct Care Workload
59th Med Wing - Lackland	Air Force	$176,462	$87,171	$73,742
633rd Med Grp Langley - Eustis	Air Force	$57,862	$39,900	$36,482
Ft. Belvoir Community Hospital	JTF CapMed	$262,324	$127,323	$111,013
NMC Portsmouth	Navy	$343,726	$278,386	$252,380
Madigan AMC - Ft. Lewis	Army	$258,162	$211,347	$176,224
NH Bremerton	Navy	$83,604	$44,387	$38,786
NHC Hawaii	Navy	$50,615	$24,692	$23,795
Total		**$5,702,938**	**$3,705,231**	**$3,271,388**

Abbreviations:
ACH = Army Community Hospital
AMC = Army Medical Center
JTF CapMed = Joint Task Force National Capital Region Medical
MMC = Military Medical Center
NH = Navy Hospital
NHC = Naval Health Clinic
NMC = Navy Medical Center
NMMC = National Military Medical Center

All but one parent MTF (673rd Medical Group – Elmendorf Air Force Base) would have had lower outpatient costs had they been able to provide care at the same cost per episode as the private sector. Overall, the cost of providing direct care outpatient workload at the 40 domestic DoD hospitals and clinics with over $50 million in costs would have been 35 percent lower had the workload been performed in private sector facilities. If only the cost to DoD is considered, the cost would have been 43 percent lower. Actual direct care costs and the discrepancy between the former and the value of direct care workload would have been even larger had we taken into account the full cost of military manpower.

b. Comparisons by Major Diagnostic Category

In Table 7, we compare direct with purchased care outpatient costs by MDC. Because MDCs describe diagnoses rather than procedures, there is not a unique mapping between the two, i.e., the same procedure can be performed for multiple diagnosis categories. The costs shown are for matching MDCs, procedures, and 50-mile radius regions around MTFs but exclude laboratory and radiology procedures, as they are not categorized by MDC. Multiple Significant Trauma is excluded from this table because it is treated only in an inpatient setting.

Table 7. Direct Care Outpatient Costs and Value of Care by MDC ($ Thousands)

Major Diagnostic Category	Actual Direct Care Cost	Total Value of Direct Care Workload	DoD Share of Value of Direct Care Workload
Diseases and Disorders of the Nervous System	$188,311	$99,156	$88,817
Diseases and Disorders of the Eye	$193,379	$158,598	$124,804
Diseases and Disorders of the Ear, Nose, Mouth, and Throat	$408,526	$262,177	$244,231
Diseases and Disorders of the Respiratory System	$168,395	$91,912	$76,620
Diseases and Disorders of the Circulatory System	$218,178	$134,502	$94,050
Diseases and Disorders of the Digestive System	$282,175	$180,856	$160,170
Diseases and Disorders of the Hepatobiliary System and Pancreas	$32,142	$26,963	$23,099
Diseases and Disorders of the Musculoskeletal System and Connective Tissue	$830,593	$501,020	$469,498
Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast	$327,159	$185,119	$165,015
Endocrine, Nutritional and Metabolic Diseases and Disorders	$147,545	$68,175	$53,924
Diseases and Disorders of the Kidney and Urinary Tract	$114,033	$68,063	$52,802
Diseases and Disorders of the Male Reproductive System	$42,784	$29,249	$25,326
Diseases and Disorders of the Female Reproductive System	$127,849	$72,438	$68,430
Pregnancy, Childbirth, and the Puerperium	$103,797	$92,191	$89,156
Newborns and Other Neonates with Conditions Originating in Perinatal Period	$20,073	$12,302	$11,023
Diseases and Disorders of the Blood, Blood Forming Organs, Immunological Disorders	$25,126	$13,333	$10,555
Myeloproliferative Diseases and Disorders, Poorly Differentiated Neoplasms	$55,733	$50,745	$31,135
Infectious and Parasitic Diseases, Systemic or Unspecified Sites	$44,103	$24,533	$22,593
Mental Diseases and Disorders	$565,380	$184,833	$178,626
Alcohol/Drug Use and Alcohol/Drug Induced Organic Mental Disorders	$65,391	$74,902	$73,313
Injuries, Poisonings and Toxic Effects of Drugs	$34,929	$21,701	$19,324
Burns	$4,564	$2,162	$1,835
Factors Influencing Health Status and Other Contacts with Health Services	$2,014,789	$1,250,089	$1,170,478
Human Immunodeficiency Virus (HIV) Infections	$2,632	$943	$781
Total*	**$6,017,587**	**$3,605,962**	**$3,255,605**

* MDC totals are for all 109 parent MTFs, not just the ones shown in Table 6. Some procedures are not classifiable into any MDC and are excluded from the totals.

By far, the most common MDC (in terms of total cost) is "Factors Influencing Health Status and Other Contacts with Health Services," which includes routine health examinations and preventive care and screening (among other services). If valued at private sector rates, that MDC is 61 percent more costly in a direct care setting than it is in the private sector for the same level and intensity of services. The next most common MDC is "Diseases and Disorders of the Musculoskeletal System and Connective Tissue," for which the actual direct care cost is 66 higher than the value, followed by "Mental Diseases and Disorders," for which the actual direct care cost is more than three times that of the value. The only MDC for which the actual direct care cost is lower than the value is "Alcohol/Drug Use and Alcohol/Drug Induced Organic Mental Disorders," but this MDC accounts for only 1 percent of total DoD outpatient costs.

3. Prescription Drug Cost Comparisons

Under TRICARE, beneficiaries may fill prescriptions at MTF pharmacies, at TRICARE network or non-network retail pharmacies, or through the TRICARE Pharmacy Home Delivery program. Prescription drugs are free to beneficiaries at MTF pharmacies, and beneficiaries may fill a prescription at an MTF pharmacy even if it was written by a civilian provider. TRICARE beneficiaries pay cost shares at commercial pharmacies depending on whether the drug is generic, brand, or non-formulary. The cost shares are highest at non-network pharmacies, followed by network pharmacies, and lowest for home delivery. With the exception of Active Duty members, beneficiary cost shares at network pharmacies do not vary by beneficiary category, Prime enrollment status, or Medicare eligibility.

Prescription drugs are one product where DoD has a significant cost advantage over commercial pharmacies. DoD purchases drugs directly from manufacturers and pays Federal Supply Schedule (FSS) prices for drugs dispensed by MTFs and through home delivery. These prices are available to all direct federal purchasers and are intended to be no more than the prices manufacturers charge their most-favored non-federal customers under comparable terms and conditions. Because DoD is one of the "Big Four" purchasers of pharmaceuticals, it receives even deeper discounts under the FSS. By law, these prices are 24 percent lower than non-federal average manufacturer prices.

This section will provide some insight into how much pharmacy costs are affected by FSS pricing. It differs from the previous sections on inpatient and outpatient care in that we are not comparing the costs of MTF production with purchased care, i.e., DoD does not "produce" drugs, it purchases and dispenses them. Pharmacy benefits with and without FSS pricing were included in the Federal Employees Health Benefit-like plans

discussed in IDA Paper P-5213.[37] Retaining FSS pricing for some prescriptions (e.g., the portion filled at MTFs) could reduce those plans' premiums. However, estimating the effects of DoD retaining pricing controls requires that we control for the impact of drug prices and copayments on beneficiary utilization and compare per-capita costs between direct and purchased care sources. Because many beneficiaries fill their prescriptions at a mix of direct, retail, and home delivery pharmacies, it is a challenge to estimate per-capita costs and it is beyond the scope of this paper.

The most detailed identifier of a drug is the National Drug Code (NDC). The Drug Listing Act of 1972 requires registered drug establishments to provide the Food and Drug Administration (FDA) with a current list of all drugs manufactured, prepared, propagated, compounded, or processed by them for commercial distribution. The FDA then issues a numeric product identifier, the NDC, which uniquely identifies each drug by labeler, product, and packaging. There are currently over 150,000 NDCs in the FDA's directory.

Detailed prescription drug data exists within M2 for direct, retail, and home delivery sources through the Pharmacy Data Transaction Service (PDTS). From the M2 PDTS table, we measured prescription drug workload at MTF pharmacies in terms of days' supply (i.e., the number of days for which a pharmaceutical was dispensed) and prescription drug costs as the ingredient cost (based on FSS pricing) plus an MHS-derived dispensing fee. We valued prescription drug workload at MTF pharmacies at purchased care rates (ingredient cost plus dispensing fee and taxes) by matching each NDC with the corresponding one at retail and home delivery pharmacies located within a 40-mile radius. However, because there are so many possible drugs that can be prescribed and that come in different forms (based on the number of NDCs), finding a match for each within a 40-mile radius can result in many unmatched drugs. In fact, we found that only 60 percent of NDCs could be matched. To increase the match rate, we used the Generic Class Number (GCN) instead of the NDC to identify drugs. Although the GCN is not as detailed as the NDC, it uniquely identifies a drug by strength, dosage, and form and is detailed enough for our purposes. Using the GCN identifier, we found an 89 percent match rate (in terms of total direct care cost) with retail drugs and a 79 percent match with home delivery drugs. Considering that about 20 percent of drugs dispensed at DoD pharmacies are over-the-counter medications (which are not included in the purchased care claims data), those match rates are about as high as can be expected. As with the inpatient and outpatient cost analyses, we applied the ratio of total direct care prescription drug costs to total matching direct care prescription drug costs as a scale factor to inflate the total value of prescription drug services.

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[37] Burns, Lurie, and Horowitz, "Analyses of Military Healthcare Benefit Design and Delivery."

As with the inpatient and outpatient analyses in this chapter, we calculated the cost of direct care prescriptions at purchased care rates two different ways: (1) as total private sector costs, regardless of payer (DoD, beneficiary, or OHI); and (2) as only the DoD share of private sector costs. The results are shown in Table 8.

Table 8. Direct Care Prescription Costs and Value of Care ($ Thousands)

Source System	Expense Type	Actual Direct Care Cost	Total Value of Direct Care Workload	DoD Share of Value of Direct Care Workload
Retail	Claims Cost	$1,890,078	$4,950,270	$3,897,625
	Refunds	$0	$1,386,076	$1,386,076
	Net Cost	$1,890,078	$3,564,194	$2,511,549
Home Delivery	Claims Cost	$1,890,078	$1,986,368	$1,913,340
Overall	Claims Cost	$1,890,078	$3,722,819	$3,075,866
	Refunds	$0	$1,042,389	$1,042,389
	Net Cost	$1,890,078	$2,680,430	$2,033,477

The National Defense Authorization Act for FY 2008 mandated that the TRICARE retail pharmacy program be treated as an element of DoD and, as such, be subject to the same pricing standards as other federal agencies. As a result, drug manufacturers began providing refunds to DoD on most brand-name retail drugs beginning in FY 2008. The TRICARE pharmacy claims data reflect the costs paid by DoD to retail and home delivery pharmacies; they do not include an offset for retail pharmacy refunds. The latter are provided by drug manufacturers, with about a six-month time lag from dispensing to when DoD receives the funds. Table 8 shows both the pre- and post-refund values of direct care pharmacy workload. On a pre-refund basis, the cost of providing direct care prescriptions would have been 162 percent higher had the prescriptions been dispensed at retail pharmacies. After refunds, the differential drops to 89 percent, still significantly higher than at direct care pharmacies. Even considering only the cost to DoD, the retail pharmacy cost is still 33 percent higher.

The cost of dispensing direct care prescriptions would have been 5 percent higher had they been dispensed at home delivery pharmacies. If we consider only the cost to DoD, the differential drops to only 1 percent. Overall, in FY 2013, 56 percent of private sector pharmacy claims were retail and 44 percent were home delivery (in terms of days' supply). Weighting the retail and home delivery numbers by those percentages gives the overall numbers in Table 8. After retail pharmacy refunds are applied, the overall cost of dispensing direct care prescriptions would have been 42 percent higher had the prescriptions been dispensed at a mix of retail and home delivery pharmacies. The latter percentage drops to 8 percent if we consider only the cost to DoD.

4. Conclusions

To enhance our understanding of the costs of delivering the TRICARE benefit as it is now constituted, IDA compared the costs of direct and purchased care for the same level and types of services. In the previous chapter, we compared the actual costs of producing MTF workload with an estimate of what it would have cost if priced at private sector rates. We examined MTF efficiency in delivering inpatient and outpatient services, confining the comparisons to a 50-mile-radius around each MTF. In addition, we analyzed the MTF cost advantage in dispensing prescription drugs.

Table 9 summarizes our findings based on the comparisons of actual MTF workload costs with estimated private sector costs for performing the same workload (the total, not just the DoD cost). We calculated inpatient efficiency scores as the ratio of purchased care to direct care costs for each domestic military hospital; we calculated outpatient efficiency scores in an analogous manner, but for costs rolled up to the parent MTF level. We also calculated overall efficiency scores based on the sum of inpatient and outpatient costs. For economy of presentation, we show only those facilities with more than $400 million in total (inpatient plus outpatient) workload.

Table 9. MTF Efficiency Scores

Facility	Service	Inpatient Efficiency Score	Outpatient Efficiency Score	Overall Efficiency Score
Bassett ACH - Ft. Wainwright	Army	1.27*	0.89	0.97
673rd Med Grp - Elmendorf	Air Force	1.13*	1.12*	1.13*
60th Med Grp - Travis	Air Force	0.85	0.61	0.73
NH Camp Pendleton	Navy	0.73	0.66	0.68
NH Lemoore	Navy	0.43	0.42	0.42
NMC San Diego	Navy	0.87	0.62	0.71
NH Twentynine Palms	Navy	0.66	0.53	0.56
Evans ACH - Ft. Carson	Army	0.89	0.82	0.83
10th Med Group - USAF Academy	Air Force	–	0.67	0.67
NH Pensacola	Navy	0.44	0.56	0.53
NH Jacksonville	Navy	0.48	0.67	0.62
96th Med Grp - Eglin	Air Force	0.63	0.70	0.68
Eisenhower AMC - Ft. Gordon	Army	0.72	0.67	0.68
Martin ACH - Ft. Benning	Army	0.62	0.88	0.82

Facility	Service	Inpatient Efficiency Score	Outpatient Efficiency Score	Overall Efficiency Score
Winn ACH - Ft. Stewart	Army	0.66	0.74	0.72
Tripler AMC - Ft. Shafter	Army	0.71	0.67	0.68
Irwin ACH - Ft. Riley	Army	0.88	0.74	0.76
Blanchfield ACH - Ft. Campbell	Army	0.64	0.75	0.73
Ireland ACH - Ft. Knox	Army	0.52	0.66	0.64
Bayne - Jones ACH - Ft. Polk	Army	0.45	0.54	0.52
779th Med Grp - Andrews	Air Force	–	0.54	0.54
Walter Reed Nat Mil Med Ctr	Joint	0.53	0.34	0.42
Kimbrough ACC - Ft. Meade	Army	–	0.54	0.54
81st Med Grp - Keesler	Air Force	0.58	0.79	0.71
L. Wood ACH - Ft. Leonard Wood	Army	1.55*	0.86	0.99
99th Med Grp - O'Callaghan Hosp	Air Force	0.86	0.72	0.77
Keller ACH - West Point	Army	0.51	0.35	0.39
Womack AMC - Ft. Bragg	Army	0.59	0.70	0.67
NH Camp Lejeune	Navy	1.17*	0.61	0.76
88th Med Grp - Wright - Patterson	Air Force	0.61	0.60	0.60
Reynolds ACH - Ft. Sill	Army	0.50	0.84	0.77
Naval Health Clinic New England	Navy	–	0.32	0.32
NH Beaufort	Navy	0.44	0.54	0.53
Moncrief ACH - Ft. Jackson	Army	0.61	0.62	0.62
William Beaumont AMC - Ft. Bliss	Army	0.67	0.70	0.69
Brooke AMC-Ft. Sam Houston	Army	0.54	0.65	0.58
Darnall AMC - Ft. Hood	Army	0.71	0.87	0.83
59th Med Wing - Lackland	Air Force	–	0.49	0.49
633rd Med Grp Langley - Eustis	Air Force	0.55	0.69	0.64
McDonald AHC - Ft. Eustis	Army	–	0.63	0.63
Ft. Belvoir Community Hospital	Joint	0.47	0.49	0.48
NMC Portsmouth	Navy	0.57	0.81	0.71
Madigan AMC - Ft. Lewis	Army	0.79	0.82	0.81
NH Bremerton	Navy	0.56	0.53	0.54
NHC Hawaii	Navy	–	0.49	0.49
Guthrie AHC - Ft. Drum	Army	–	0.50	0.50

* “Efficient” MTFs based on a score of 1.00 or greater

Abbreviations:
ACH = Army Community Hospital
AMC = Army Medical Center
JTF CapMed = Joint Task Force National Capital Region Medical
MMC = Military Medical Center
NH = Navy Hospital
NHC = Naval Health Clinic
NMC = Navy Medical Center
NMMC = National Military Medical Center

Only one MTF (673rd Medical Group – Elmendorf Air Force Base, Alaska) has an overall efficiency score above 1.00, meaning it produced its inpatient and outpatient workload at a cost lower than could have been purchased in the private sector. The other DoD hospital in Alaska (Bassett Army Community Hospital – Ft. Wainwright) has an overall efficiency score just under 1.00 and an inpatient efficiency score of 1.27, the second highest of any DoD hospital. Because Alaska has one of the highest per capita costs for healthcare of any state in the nation,[38] it is difficult to determine whether the high efficiency scores for the two Alaska hospitals are due to low MTF workload costs or high private sector costs in the surrounding areas. The remaining MTFs are producing inpatient and/or outpatient workload at costs about 50 percent higher (on average) than what it would have cost if purchased in the private sector.

[38] See "Health-Care Costs: A state-by-state comparison," *Wall Street Journal*, April 9, 2013, http://www.wsj.com/news /interactive/HEALTHCOST0409F20130409. The per capita costs shown in the referenced table are for 2009 and are not adjusted for population demographic differences across states.

Appendix A.
MHS Data Sources and Workload Measures

Key Data Sources

Expense Assignment System Version IV (EAS IV) Repository

The Expense Assignment System Version IV (EAS IV) Repository is a query system, similar to the MHS Management Analysis and Reporting Tool (M2), that houses detailed financial and manpower data from the Medical Expense and Performance Reporting System (MEPRS). MEPRS is the Tri-Service financial accounting system, reporting DoD-standardized (across the Services) expense, staffing, and summary workload data for fixed military medical and dental treatment facilities. In this paper, we use MEPRS expense and staffing data, but not workload data. MEPRS workload data are too aggregated for our purposes; we use encounter-level data from M2 instead.

MEPRS provides data by Functional Cost Code (FCC), a four-level hierarchical accounting system representing work centers or reporting facilities. The first letter of each FCC identifies the broadest level of service provided:

- A: Inpatient Care
- B: Outpatient Care
- C: Dental Care
- D: Ancillary Services
- E: Support Services
- F: Special Programs
- G: Medical Readiness

Subsequent letters identify work centers in greater detail, e.g., BC identifies Obstetrical and Gynecological Care and BCA identifies the Family Planning Clinic. The first three letters of the FCC are standardized across DoD, whereas the fourth letter is specific to each Military Treatment Facility (MTF).

Accounts A, B, C, F, and G are referred to as final operating accounts, whereas accounts D and E (Ancillary and Support Services) are intermediate, or "stepdown," accounts. Expenses from the Ancillary and Support accounts are allocated (stepped down) proportionately across the final accounts based on performance factors established by DoD. At the end of the allocation process, no expenses remain in the intermediate accounts.

Military Health System Data Repository (MDR)

The MHS Data Repository (MDR) is a data warehouse containing the most complete collection of data about beneficiaries of the MHS and their healthcare. The MDR receives data from a wide variety of sources throughout DoD and processes these data according to a set of published business rules. Information in the MDR is accessible as statistical analysis system datasets or as American Standard Code for Information Interchange (ASCII) flat files. The environment has no user interface in the traditional sense; it is intended for expert programmers and analysts only. Detailed information about the MDR, including the types of data that are included and a data dictionary, can be found at http://tricare.mil/tma/dhcape/data/fs.aspx.

Military Health System Management Analysis and Reporting Tool (M2)

M2 is a powerful ad hoc query tool used to manage and oversee operations from all MHS regions worldwide. It is based on software called Business Objects, which give the user the ability to query the data objects in the M2 universe and to analyze and report the results. Data objects include both summary and detailed population, clinical, and financial data. The clinical data include information on inpatient, outpatient, pharmacy, laboratory, and radiology services at MTFs as well as private-sector claims for inpatient, outpatient, pharmacy (including home delivery), and ancillary services. The financial data include summary expense and manpower information from MEPRS. M2 offers a quick and economical way to access large amounts of data and to display results in conveniently formatted tables or to export the data to other software for more detailed analysis. Many of the data included in the MDR are available in M2 in a much more accessible form. Data from M2 are the source for most of the tables and charts in this paper. More detailed information about M2, including the types of data that are included and a data dictionary, can be found at http://tricare.mil/tma/dhcape/data/fs.aspx.

Workload Measures

The most basic measures of outpatient and inpatient workload are the number of encounters (visits) and number of hospital stays, respectively. However, these basic measures are flawed because they do not account for the variation in relative resource intensity across different procedures. For example, a thoracic spinal fusion is far more resource-intensive and costly than the removal of a heel spur, yet they both count as one encounter.

Before 1992, Medicare followed a “usual, customary and reasonable” payment method to reimburse physicians for their services. That led to inequities in payments for the same service provided by different physicians. To remedy that shortcoming, Medicare developed a measure of outpatient resource intensity, called a Relative Value Unit (RVU), as a basis for physician reimbursement. Distinct RVU values are recorded for

each medical, surgical, and diagnostic service included in the Current Procedural Terminology (CPT) code set.

An RVU is the sum of three components: a Work RVU, a Practice Expense (PE) RVU, and a Malpractice Expense RVU. The Work RVU accounts for the time, effort, technical skill, etc. required by a physician to perform a particular service; it comprises about 52 percent of the total RVU. The PE RVU accounts for a physician's office expenses, such as office space, clinical staff, and administrative overhead (e.g., billing and claims filing); it comprises about 44 percent of the total RVU. The Malpractice Expense RVU takes into consideration the cost of professional liability insurance and comprises the remaining 4 percent of the total RVU. Every few years the RVU measures are recalibrated to account for changes in medical practice and technology.

Both the total RVU and its components[1] are included in the direct and purchased care outpatient data records. However, there is no Malpractice Expense RVU in the direct care encounter data because military physicians are protected from medical malpractice lawsuits.[2] To make RVU measures commensurate between direct and purchased care, the MHS excludes Malpractice Expense RVUs from total purchased care RVUs (i.e., they are included in the purchased care claims data but are not part of the total RVU). The MHS also makes adjustments to the RVUs for some direct care procedures to accommodate MHS-unique coding and to value services for which TRICARE pays but Medicare does not (e.g., LASIK eye surgery). Weights are also adjusted downward for global procedures[3] to avoid over-crediting MTFs due to different data reporting practices from those used in the private sector. PE RVUs are also lower for direct care partly because the government bears lower administrative costs for claims filing[4] than does the private sector.

RVUs apply only to the provider portion of a healthcare encounter. A similar concept, called Ambulatory Payment Classifications (APCs), applies to facility charges

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1 The MHS actually uses several different RVU measures, each suitable for different purposes. For example, different RVU measures variously apply multiple procedure discounts, multiple provider discounts, and may be subject to unit of service and modifier impacts.

2 Medical malpractice claims cannot be filed against individual providers; they must be filed against the Military Departments.

3 Global procedure codes cover more than one day of care and include such items as post-operative follow-ups, prenatal and postpartum care, etc. Under Medicare and in the private sector, RVUs for a global procedure already account for the value of the procedure and any pre/post care. However, MHS coding rules require providers to code and value the pre/post care separately. Accordingly, the MHS adjusts the RVU values for global procedures so they sum to the ones used by Medicare.

4 The government files third-party claims with commercial insurers to receive reimbursement for care provided to beneficiaries with other health insurance (OHI). In FY 2013, third-party collections totaled $154.5 million (http://www.tricare.mil/ocfo/_docs/Final_6_yr_qc_Q4_2013.xlsx).

(e.g., ambulatory surgery centers, hospital emergency rooms) and is subject to quantity, multiple procedure discounting, and modifier impacts. Medicare uses APCs to reimburse facilities paid under its Outpatient Prospective Payment System (OPPS). In May 2009, TRICARE adopted APCs as a basis for facility reimbursement under its own OPPS.

A similar concept to RVUs (Relative Weighted Products, or RWPs) exists for inpatient services as well. Based on Medicare Severity Diagnosis Related Group codes, RWPs measure the relative complexity of services and resources used by acute-care inpatient facilities. They do not account for the amount and intensity of inpatient professional services (i.e., services provided in an inpatient facility by a physician or other medical professional that are billed separately from the inpatient facility); those are measured by RVUs in the same manner as for outpatient services.

Appendix B.
Direct Care Outpatient Cost Allocation Methodology

Direct care outpatient encounter data are contained in the Comprehensive Ambulatory/Professional Encounter Record (CAPER) table in both the MDR and M2. The CAPER table contains one record per outpatient encounter. Each encounter record contains a CPT code for up to 13 procedures and, in the case of facility records (e.g., ambulatory surgery centers, emergency rooms), up to 13 APC codes. The full cost of each encounter, covering all portions of the hospital/clinic's outpatient cost, is allocated from MEPRS B accounts and includes the following components: clinician salary, professional (non-physician) salary, laboratory, radiology, other ancillary, pharmacy, support, and other. Costs are allocated to cases based on a composite of RVU and APC weights except for the clinician component, which is allocated based on RVUs only. We backed out pharmacy, laboratory, radiology, and other ancillary costs from the full cost because we cost those procedures separately.

Because the aforementioned costs apply to the entire encounter record and not to individual procedures, we need a methodology to allocate the costs to those procedures. We accomplish this by calculating the percentage of the composite weight that is accounted for by each RVU and apply it to the net total cost, i.e.,

$$\text{Procedure } i \text{ Cost} = \left(\frac{\text{Procedure } i \text{ Total RVU (Work + PE)}}{\sum_{j=1}^{n} \text{Procedure } j \text{ Total RVU (Work + PE)}} \right) \times$$

$$\left[\text{Clinician Salary} + \left(1 - \frac{\text{APC Aggregate Weight}}{\text{Composite Weight}} \right) \times \left(\text{Prof. Salary} + \text{Support Cost} + \text{Other Cost} \right) \right].$$

Although individual APC procedure codes are recorded on CAPER facility records, APCs are not recorded at all in the purchased care data (needed for comparison with direct care data). However, we were able to obtain a single purchased care cost factor from OASD(HA) to apply to the APC Aggregate Weight. Therefore, our APC allocation methodology applies to the APC Aggregate Weight and not to individual APCs, i.e.,

$$\text{Total APC Cost} = \left(\frac{\text{APC Aggregate Weight}}{\text{Composite Weight}} \right) \times \left(\text{Prof. Salary} + \text{Full Cost Support} + \text{Full Cost Other} \right).$$

Appendix C.
Comparison of Direct Care Outpatient Costs with Purchased Care Values

Table 6 (on page 27) compared actual direct care outpatient costs by parent MTF (i.e., workload for all child MTFs rolled up to parent level) with the costs of the same workload if purchased from the private sector. For economy of presentation, we showed only those parent facilities with more than $50 million in outpatient workload. Table C-1 shows the results for all 109 parent MTFs in the United States.

Table C-1. Direct Care Outpatient Costs and Value of Care by Parent MTF ($ Thousands)

Parent Facility	Service	Actual Direct Care Cost	Total Value of Direct Care Workload	DoD Share of Value of Direct Care Workload
Fox AHC - Redstone Arsenal	Army	$16,095	$6,168	$5,621
Lyster AHC - Ft. Rucker	Army	$19,913	$11,491	$10,799
42nd Medical Group - Maxwell	Air Force	$16,691	$7,686	$7,287
Bassett ACH - Ft. Wainwright	Army	$54,872	$48,646	$46,662
673rd Med Grp - Elmendorf	Air Force	$66,317	$74,523	$66,378
R.W. Bliss AHC - Ft. Huachuca	Army	$23,226	$9,911	$9,412
56th Med Grp - Luke	Air Force	$28,138	$15,298	$13,841
355th Med Grp - Davis Monthan	Air Force	$20,756	$9,864	$9,286
19th Medical Group - Little Rock	Air Force	$15,009	$5,896	$5,765
60th Med Grp - Travis	Air Force	$109,109	$66,959	$46,543
9th Med Grp - Beale	Air Force	$9,686	$4,383	$4,250
30th Med Grp - Vandenberg	Air Force	$9,616	$3,963	$3,753
412th Med Grp - Edwards	Air Force	$11,777	$3,655	$3,437
NH Camp Pendleton	Navy	$145,801	$96,764	$91,724
NH Lemoore	Navy	$36,669	$15,319	$14,486
NMC San Diego	Navy	$400,348	$248,267	$213,512
NH Twentynine Palms	Navy	$40,141	$21,264	$20,263
Evans ACH - Ft. Carson	Army	$143,256	$117,060	$108,337
10th Med Group - USAF Academy	Air Force	$47,086	$31,532	$28,363
436th Med Grp - Dover	Air Force	$11,033	$5,921	$5,718
NH Pensacola	Navy	$114,278	$63,424	$55,736
NH Jacksonville	Navy	$125,923	$83,925	$76,926

Parent Facility	Service	Actual Direct Care Cost	Total Value of Direct Care Workload	DoD Share of Value of Direct Care Workload
96th Med Grp - Eglin	Air Force	$71,913	$50,559	$44,164
325th Med Grp - Tyndall	Air Force	$14,613	$6,473	$6,181
6th Med Grp - MacDill	Air Force	$36,181	$19,400	$17,878
45th Med Grp - Patrick	Air Force	$14,311	$6,736	$6,121
Eisenhower AMC - Ft. Gordon	Army	$132,615	$88,342	$74,203
Martin ACH - Ft. Benning	Army	$104,336	$91,329	$87,171
Winn ACH - Ft. Stewart	Army	$92,029	$67,708	$64,715
23rd Med Grp - Moody	Air Force	$9,872	$4,581	$4,464
78th Med Grp - Robins	Air Force	$19,136	$6,874	$6,532
Tripler AMC - Ft. Shafter	Army	$277,654	$185,575	$165,905
366th Med Grp - Mountain Home	Air Force	$16,681	$7,141	$6,649
375th Med Grp - Scott	Air Force	$28,514	$15,273	$14,240
Irwin ACH - Ft. Riley	Army	$77,616	$57,176	$55,370
Munson AHC - Ft. Leavenworth	Army	$25,423	$14,257	$13,530
22nd Med Grp - McConnell	Air Force	$11,219	$5,544	$5,193
Blanchfield ACH - Ft. Campbell	Army	$123,729	$93,348	$89,349
Ireland ACH - Ft. Knox	Army	$86,739	$57,536	$53,397
2nd Med Grp - Barksdale	Air Force	$18,740	$7,902	$7,684
Bayne - Jones ACH - Ft. Polk	Army	$52,199	$28,161	$26,836
779th Med Grp - Andrews	Air Force	$62,229	$33,802	$29,836
Walter Reed Nat Mil Med Ctr	Joint	$536,645	$183,152	$148,634
NHC Patuxent River	Navy	$21,677	$7,263	$6,832
Kimbrough ACC - Ft. Meade	Army	$83,801	$45,609	$41,634
81st Med Grp - Keesler	Air Force	$65,851	$52,069	$37,337
14th Med Grp - Columbus	Air Force	$7,151	$2,283	$2,159
L. Wood ACH - Ft. Leonard Wood	Army	$67,714	$58,556	$55,635
509th Med Grp - Whiteman	Air Force	$11,392	$4,956	$4,763
341st Med Grp - Malmstrom	Air Force	$10,224	$3,964	$3,838
55th Med Grp - Offutt	Air Force	$36,712	$16,275	$14,675
99th Med Grp - O'Callaghan Hosp	Air Force	$82,081	$59,481	$46,691
377th Med Grp - Kirtland	Air Force	$13,581	$5,214	$5,052
49th Med Grp - Holloman	Air Force	$10,483	$4,672	$4,488
27th Spec Ops Med Grp - Cannon	Air Force	$9,811	$4,987	$4,871
Keller ACH - West Point	Army	$44,867	$15,861	$14,708
Womack AMC - Ft. Bragg	Army	$221,271	$155,330	$144,934
4th Med Grp - Seymour Johnson	Air Force	$11,422	$4,604	$4,498
NH Camp Lejeune	Navy	$126,098	$77,137	$74,306

Parent Facility	Service	Actual Direct Care Cost	Total Value of Direct Care Workload	DoD Share of Value of Direct Care Workload
NHC Cherry Point	Navy	$32,940	$15,180	$14,505
319th Med Grp - Grand Forks	Air Force	$7,575	$2,607	$2,483
5th Med Grp - Minot	Air Force	$11,173	$5,682	$5,527
88th Med Grp - Wright - Patterson	Air Force	$90,340	$53,829	$42,921
72nd Med Grp - Tinker	Air Force	$25,591	$9,518	$9,032
97th Med Grp - Altus	Air Force	$6,754	$2,257	$2,089
Reynolds ACH - Ft. Sill	Army	$70,480	$59,099	$55,320
Naval Health Clinic New England	Navy	$67,971	$21,605	$20,089
20th Med Grp - Shaw	Air Force	$14,735	$6,485	$6,264
Naval Health Clinic Charleston	Navy	$26,570	$9,941	$9,506
NH Beaufort	Navy	$59,662	$32,226	$31,041
Moncrief ACH - Ft. Jackson	Army	$62,247	$38,403	$36,241
28th Med Grp - Ellsworth	Air Force	$10,381	$4,695	$4,534
William Beaumont AMC - Ft. Bliss	Army	$175,978	$123,950	$112,213
Brooke AMC-Ft. Sam Houston	Army	$322,357	$208,170	$162,935
Darnall AMC - Ft. Hood	Army	$196,724	$170,256	$163,793
7th Med Grp - Dyess	Air Force	$11,336	$4,368	$4,213
82nd Med Grp - Sheppard	Air Force	$19,732	$7,893	$7,227
47th Med Grp - Laughlin	Air Force	$5,645	$2,236	$2,099
59th Med Wing - Lackland	Air Force	$176,462	$87,171	$73,742
NHC Corpus Christi	Navy	$31,945	$8,271	$7,853
75th Med Grp - Hill	Air Force	$18,605	$9,319	$8,633
633rd Med Grp Langley - Eustis	Air Force	$57,862	$39,900	$36,482
McDonald AHC - Ft. Eustis	Army	$44,930	$28,291	$26,171
Kenner AHC - Ft. Lee	Army	$33,414	$19,440	$18,781
Ft. Belvoir Community Hospital	Joint	$262,324	$127,323	$111,013
NMC Portsmouth	Navy	$343,726	$278,386	$252,380
Madigan AMC - Ft. Lewis	Army	$258,162	$211,347	$176,224
NH Bremerton	Navy	$83,604	$44,387	$38,786
NH Oak Harbor	Navy	$31,445	$14,994	$14,334
92nd Med Grp - Fairchild	Air Force	$11,961	$4,398	$4,120
90th Med Grp - F.E. Warren	Air Force	$9,441	$3,664	$3,545
Weed ACH - Ft. Irwin	Army	$27,711	$11,690	$11,310
354th Med Grp - Eielson	Air Force	$7,035	$4,365	$4,231
61st Med Group - Los Angeles	Air Force	$8,045	$3,065	$2,971
21st Med Grp - Peterson	Air Force	$19,775	$10,399	$10,011
NHC Hawaii	Navy	$50,615	$24,692	$23,795

Parent Facility	Service	Actual Direct Care Cost	Total Value of Direct Care Workload	DoD Share of Value of Direct Care Workload
15th Med Grp - Hickam	Air Force	$12,545	$6,159	$6,025
NHC Annapolis	Navy	$22,541	$10,209	$9,709
66th Med Grp - Hanscom	Air Force	$7,254	$2,257	$2,173
87th Med Grp - McGuire	Air Force	$17,205	$9,375	$9,133
Guthrie AHC - Ft. Drum	Army	$47,577	$23,636	$23,066
71st Med Grp - Vance	Air Force	$4,945	$1,973	$1,785
628th Med Grp - Charleston	Air Force	$12,243	$5,629	$5,464
17th Med Grp - Goodfellow	Air Force	$7,750	$3,963	$3,796
359th Med Grp - Randolph	Air Force	$16,638	$10,324	$9,536
NHC Quantico	Navy	$31,798	$12,655	$12,303
579th Med Group - Bolling	Air Force	$8,125	$3,412	$3,185
1st Spec Ops Med Grp - Hurlburt	Air Force	$15,761	$9,028	$8,848
460th Med Grp - Buckley	Air Force	$8,647	$3,386	$3,311
Total		**$7,010,551**	**$4,312,554**	**$3,857,316**

Abbreviations:

ACH = Army Community Hospital
AMC = Army Medical Center
JTF CapMed = Joint Task Force National Capital Region Medical
MMC = Military Medical Center
NH = Navy Hospital
NHC = Naval Health Clinic
NMC = Navy Medical Center
NMMC = National Military Medical Center

Illustrations

Figures

Tables

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Abbreviations

ACH	Army Community Hospital
ADSM	Active Duty Service Member
AMC	Army Medical Center
APC	Ambulatory Payment Classification
ASCII	American Standard Code for Information Interchange
ATC	Average Total Cost
AVC	Average Variable Cost
CAPER	Comprehensive Ambulatory/Professional Encounter Record
CBO	Congressional Budget Office
CPT	Current Procedural Terminology
DEA	Data Envelopment Analysis
DEERS	Defense Enrollment Eligibility Reporting System
DHA	Defense Health Agency
DHP	Defense Health Program
DoD	Department of Defense
DRG	Diagnosis-Related Group
EAS IV	Expense Assignment System Version IV
FCC	Functional Cost Code
FDA	Food and Drug Administration
FSS	Federal Supply Schedule
FY	Fiscal Year
GCN	General Class Number
GME	Graduate Medical Education
HIV	Human Immunodeficiency Virus
ICD-9-CM	International Classification of Diseases, 9th Revision, Clinical Modification
IDA	Institute for Defense Analyses
IM/IT	Information Management/Information Technology
JTF CapMed	Joint Task Force National Capital Region Medical
M2	MHS Management Analysis and Reporting Tool
MC	Marginal Cost

MCRMC	Military Compensation and Retirement Modernization Commission
MDC	Major Diagnostic Category
MDR	MHS Data Repository
MEPRS	Medical Expense and Performance Reporting System
MERHCF	Medicare-Eligible Retiree Healthcare Fund
MHS	Military Health System
MILCON	Military Construction
MILPERS	Military Personnel
MMC	Military Medical Center
MNNC	National Military Medical Center
MS-DRG	Medicare Severity Diagnosis Related Group
MTF	Military Treatment Facility
NDAA	National Defense Authorization Act
NDC	National Drug Code
NH	Navy Hospital
NHC	Naval Health Clinic
NMC	Navy Medical Center
O&M	Operations and Maintenance
OASD(HA)	Office of the Assistant Secretary of Defense for Health Affairs
OCO	Overseas Contingency Operations
OHI	Other Health Insurance
OPPS	Outpatient Prospective Payment System
PB	President's Budget
PCS	Permanent Change of Station
PDTS	Pharmacy Data Transaction Service
PE	Practice Expense
RDT&E	Research, Development, Test and Evaluation
RVU	Relative Value Unit
RWP	Relative Weighted Product
TMA	TRICARE Management Activity
UMP	Unified Medical Program
US	United States
USD(C)	Under Secretary of Defense (Comptroller)
USFHP	Uniformed Services Family Health Plan

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14. ABSTRACT

In 2016, the Congress expects to consider proposals for modifying how the Department of Defense provides health-related services to its eligible beneficiaries. It is important to understand the current cost of the military healthcare benefit and its component elements when considering how the benefit can be modernized and made more sustainable. IDA estimated the cost of delivering care in military treatment facilities (MTFs) and compared those costs with their private sector counterparts. This paper compares the actual cost of producing MTF workload with an estimate of what it would have cost if the same level and volume of workload were performed in the private sector. The results show that, with a few exceptions, almost all MTFs have higher costs than their private sector counterparts.

15. SUBJECT TERMS

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